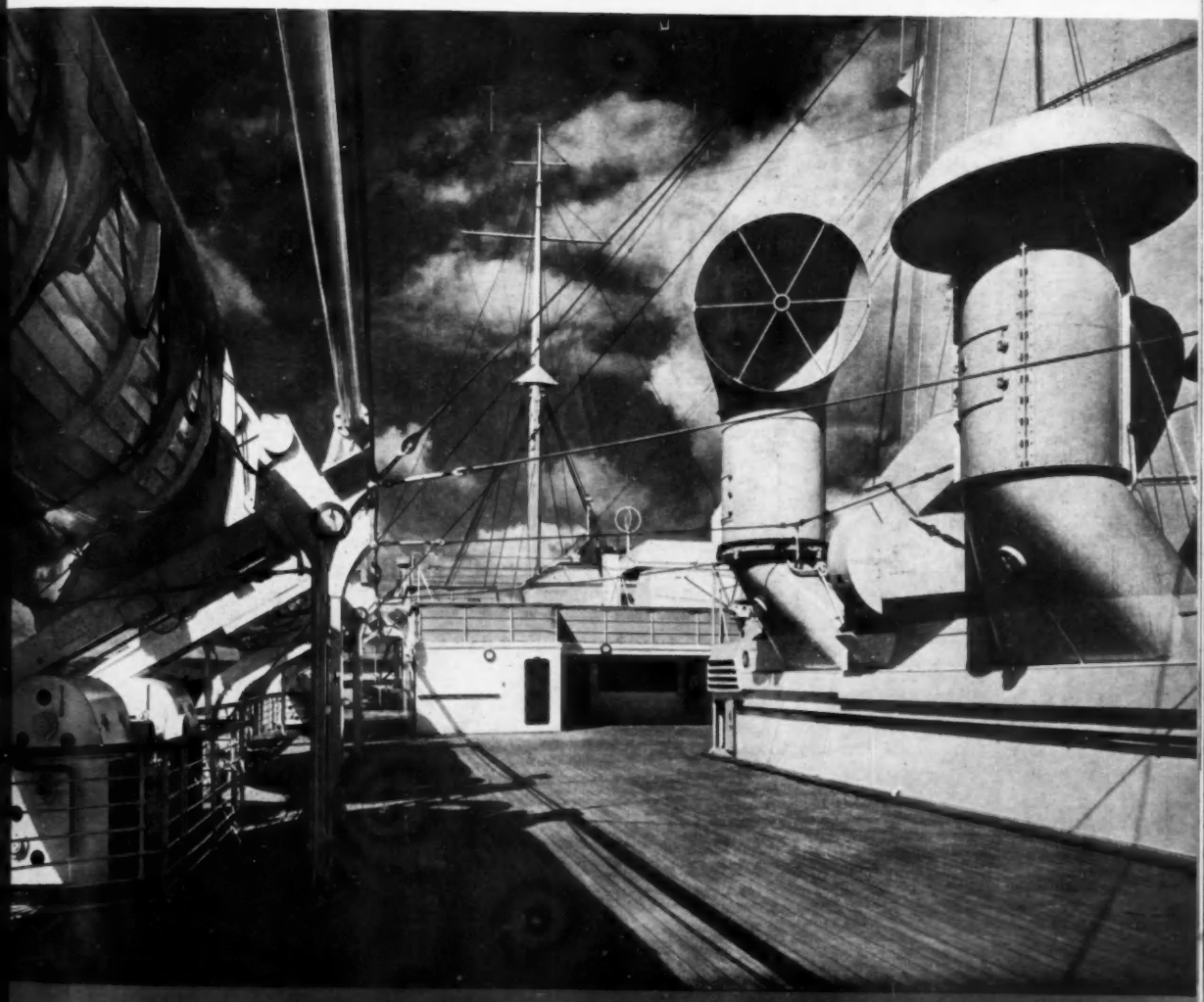
Design

MAR 27 1951

THE MONTHLY JOURNAL FOR MANUFACTURERS AND DESIGNERS



Number 26 : February 1951

THE COUNCIL OF INDUSTRIAL DESIGN : PRICE TWO SHILLINGS

DO CHILDREN TALK T.I.?

A small boy on a tricycle. Nothing special about that — unless he thinks he's a dirt-track rider, when you have to look out. But a couple of generations ago there was no T.I., and most small boys had nothing more exciting to ride than a tea-tray. No trikes, no children's bikes, no rocking boats, or chutes, or slides, or climbing frames, or half the things clever people manufacture from (as it happens) T.I. materials. Nor much help from Mother, either, with no T.I. to help *her* run the house. Yet even today . . . funny thing . . . you hardly ever hear a child mention T.I.

The letters T.I. stand for Tube Investments Limited, of the Adelphi, London, W.C.2 (Trafalgar 5633). They also stand for the thirty producing companies of the co-ordinated T.I. group, makers of precision tubes, of bicycles and components, of wrought aluminium alloys, electrical appliances, pressure vessels, paints, road signs, metal furniture . . . and essential mechanical parts for a thousand and one things which everybody uses.

THE SURNAME OF A THOUSAND THINGS

Number 26 : February 1951

Design

THE MONTHLY JOURNAL FOR MANUFACTURERS AND DESIGNERS

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EDITOR: Alec Davis

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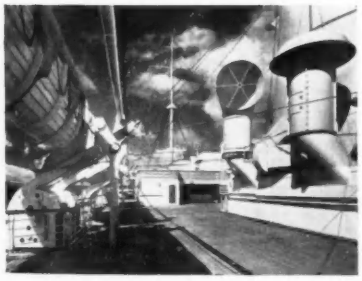


COVER PHOTOGRAPH: This satisfying group of nautical shapes was photographed on board the Orient liner *Orion* (after her extensive post-war refitting). The influence of Sir Colin Anderson, of the Orient Line, as a patron of design is discussed in an article on pp 3–5.
Photograph by Stewart Bale, Liverpool

A question of conscience

RISKING TEDIUM through repetition, we return this month to the subject of Design Policy in Industry, for unless we can pin down this amiable abstraction we shall derive no greater profit from it than a fund of impeccable platitudes.

Indeed there is no time like the present for coming to grips with this problem, for seldom have so many lips been serving the cause of design in industry with so little understanding of what is involved in its successful execution. Ask any manufacturer if he has a design policy and he will probably answer "Yes," whether he proceeds by trial and error or by error alone; whether he takes his cue from "the lady with the string bag" or from the Council of Industrial Design; whether he retains his sister-in-law or an RDI as his consultant; and whether he pays his designer three pounds a week or three thousand a year.

And therein lies the core of this problem, for there is no handy rule of thumb whereby one can say what is and what is not a design policy, and there is no set pattern that is applicable to all industries or even to all firms in one industry. If there is good sense in retaining an eminent consultant in one case, there may in another be a grain or two in relying on the intuition of kith and kin. If one firm can afford three thousand a year on a designer, it does not follow that all should, or that all designers are worth that figure. It is no part of our mission to inflate the overheads of industry by advocating a costly superstructure of opiniated experts.

But what we do ask most earnestly and urgently is that all manufacturers should consider whether the way they go about their design problems has the virtue of any consistent thought, whether it ranks with their handling of production, marketing or publicity matters; whether, in short, design is treated as a responsibility of top management or left to juniors or to accountants—or whether it is left out of account altogether.

The critical observer of a firm's activities will not take long to weigh up the character of its design policy. It is often apparent from a sight of a letter-heading; if this first and most important envoy is crude and common, the chances are that the same sort of indifference will be carried through into the product. All forms of printed matter, from visiting cards and labels to posters and

packaging, reflect the quality of thought and degree of importance that is given to design policy.

The operation of the 1951 Stock List has provided innumerable examples of the half-baked approach to design. Time and again decent enough products have been let down by vulgar presentation, by commonplace packs, by typographically illiterate brochures or by display advertisements as amateurish as the publicity slides in a provincial cinema. These things may not seem important so long as the product is good, but when they occur they cast doubt on the product itself; the inference is that its success was a fluke or a flash in the pan, and that nobody is giving any serious and continuous thought to design as a whole.

Conversely, when a company's handling of its promotion is distinguished by style and taste, when the same standards are maintained throughout all its activities from its house magazine to its annual report and from the design of its products to the dressing of its showrooms, the casual observer senses at once that The Boss must care for these things.

And that is the point. Design depends on patronage, whether within a single firm or in the wider fields of public amenity. Unless the board of management sponsors a design policy from the top, the chances of achieving any worth-while standard are very remote. But this does not presuppose that every managing director should be a man of exquisite taste and perception, or that directors should be artists as well as business men; it is enough if, recognising the prestige associated with a high standard of design throughout all their undertakings and recognising their own understandable limitations in this direction, they appoint someone with enthusiasm, taste and knowledge of the industry to oversee all these questions. But such an appointment must be backed to the hilt with the full weight of the board's authority.

One of the ironies of the nineteenth century was the accumulation of art galleries and museums in our industrial centres, most of them endowed by rich manufacturers who, having spent a lifetime ignoring the claims of design in their daily production, spent vast sums in their retirement building reputations as patrons of the arts; by erecting forbidding, institutional buildings for their collections, they placed yet another barrier between the artist and the needs of everyday life. Had these men spent a tithe of the cost of their fine-art patronage on design policy in their own workshops and showrooms, we would have less reason today to be spending public funds on a Council of Industrial Design; the tradition of good design would have survived and the designer would have inherited the position of authority for which he is now battling.

It is because we are convinced that design in industry must have the educated understanding of industrialists that we start in this month's issue of DESIGN a new feature called "Patrons of Design." We shall seek out and interview those executives, great and small, who from the evidence of their past work, present actions or future plans appear to understand the meaning of a consistent design policy.

No one is better qualified to be the first subject in the series than Sir Colin Anderson, of the Orient Line. His company has set a splendid example of twentieth-century patronage of design in all its operations and services. In Sir Colin, too, we have a connoisseur of the fine arts who brings his taste and knowledge to the service of his company; the pictures he commissions from contemporary artists are not housed in an art gallery; they hang in the lounges and saloons of the ships he controls.

But Sir Colin would also be the first to confess that his policy is an act of faith, a practice dictated by conscience rather than by any financial calculation; he cannot *prove* that the taste and care shown in every detail of the interiors of his liners have added a single passenger to the lists. But he is none the less convinced that they have been well worth-while.

It is no easier to prove statistically the rewards of good design in industry than it is to prove the rewards of honesty in business. Both are questions of conscience and self-respect. But, like those who believe that honesty pays, we take the long view and stand by the slogan "Good Design, Good Business." P. R.

Design and the engineer

"IF INDUSTRIAL DESIGN attains the place in engineering manufacture that is predicted for it, many young engineers of today and all of tomorrow are going to have much contact with industrial designers and their work; it is not too soon for them to begin to understand what this 'movement' is about and how it will affect them."

The comment is from a paper on "Industrial Design and its relation to Machine Design" presented by H. G. Conway to the Institution of Mechanical Engineers. The occasion (2 February 1951) was historic, as Mr Conway's paper inaugurated the first discussion on industrial design by members of the Institution. We hope—and believe—that it will not be the last. A. D.

PATRONS OF DESIGN : 1

SIR COLIN ANDERSON

by Gabriele Ullstein

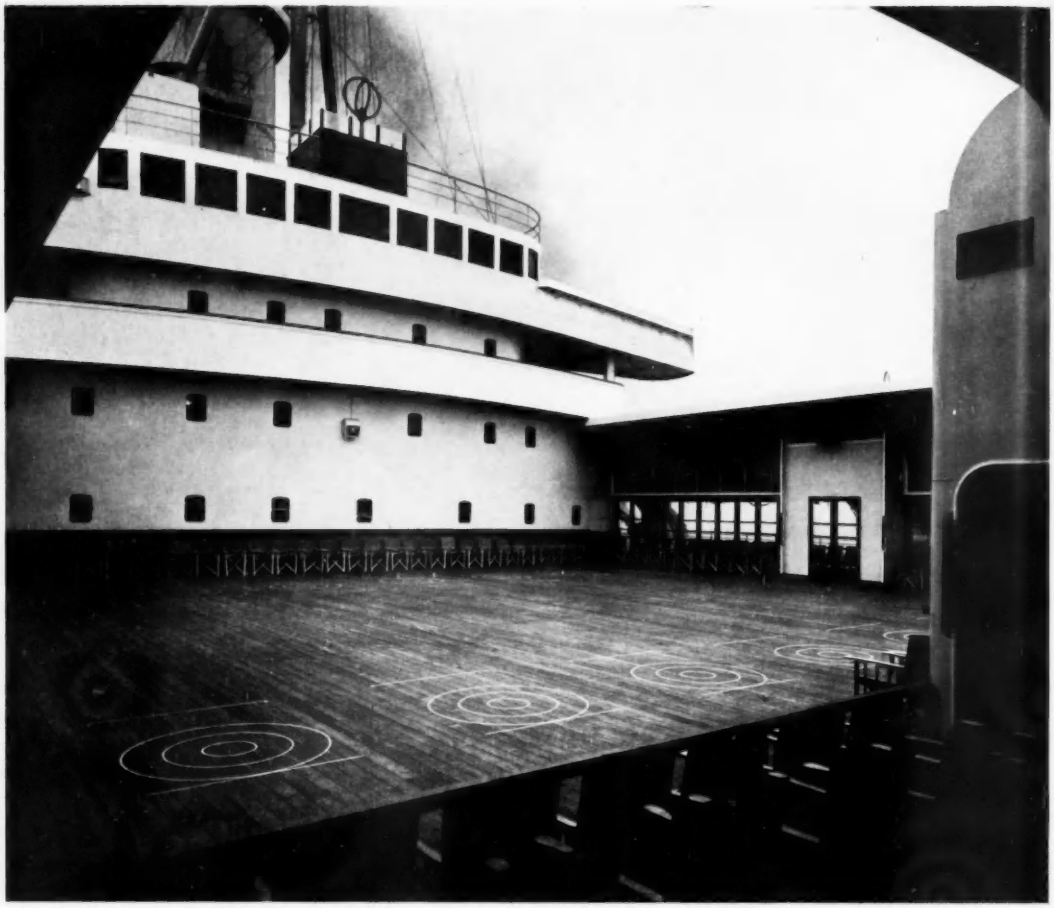
SIR COLIN ANDERSON must be described as an exceptionally well designed person. From the sober elegance of his looks and manner to the circumstances of his birth and career, everything seems to fit him to be what he is: director of a great shipping company and a patron of contemporary design. So many business magnates have shown their taste in art by presenting their native cities with galleries full of doubtful masterpieces that it is all the more refreshing to meet one whose interest in design has found its outlet in the daily work of his Company: who has not put Taste and Trade into separate rooms, with no communicating door.

Colin Anderson was born in 1904, the elder son of Sir Alan Garrett Anderson. Three generations of Andersons had been partners in the Orient Line, and before that several generations more had owned ships in Aberdeen. So much for tradition—a most valuable element in design as in other things. But tradition needs to be fertilised with imagination and creative daring, and these influences Anderson found at Eton. His contemporaries were one of the most brilliant generations of Etonians this century has produced; his friends at school included Harold Acton, Robert Byron, Cyril Connolly, Alan Clutton-Brock, Brian Howard, Anthony Powell and Henry Yorke (Henry Green, the novelist). Most of them moved on to Oxford together—Anderson went to Trinity College—and there helped to create the aesthetic style of the 'twenties, a style that in many ways remains *avant-garde* to this day.

Unlike many clever and civilised young men, Anderson found no difficulty in forsaking his elegant Bohemia for a desk (in this case a shipping clerk's) in the family business. Or rather, he forsook nothing but began to lead what he calls a "double life." His private life is spent among artists and intellectuals, and he himself has tried his hand at painting, sculpture and textile design. In 1932, the Orient Line was about to commission a new ship, the *Orion*, and Mr Anderson (the knighthood came in 1950) suggested to his senior partners that they should break away from the usual period style of interior decoration in favour of contemporary design. They not only agreed but gave him *carte blanche* to see the job through. Weeks were spent in search of a designer; then, on the strength of a model for a music-room seen in an illustrated journal, he got into touch with an architect called Brian O'Rorke.

Mr O'Rorke turned out to be 28 years old, Colin Anderson's own age. He had never had anything to do with ships, but he agreed that they *were* ships, not Tudor manor houses or Turkish baths or Louis XVI hunting boxes. This immediately raised a problem: all the standard pieces of equipment for ships, from furniture and letterheads to towels and stewards'

Orion: "*new materials, new techniques were employed*"



Orcades' *arena—a good example of a sheltered sports deck. "It is exciting to be in a ship; why pretend to be elsewhere?"*

Below, typical Orient Line cabins before and after the introduction of Brian O'Rorke, ARA, FRIBA, FSIA, *as interior designer. Fittings originally designed for the line are now widely used elsewhere—e.g., the Roanoid plastic bathroom cabinet*

uniforms, were designed to harmonise with conventional interiors. Anderson does not believe in half measures where design is concerned: he got manufacturers to design special equipment for the *Orion*; and where they proved unable to do so, he commissioned designers direct.

He also sponsored purely decorative work—murals, screens, carpets, etc—from young and progressive artists, and by the time the *Orion* was finished, Keith Murray, McKnight Kauffer, Lynton Lamb, Marion Dorn, Allan Walton, A. B. Read, and Barnett Freedman had all had a hand in her. Anderson's double life was doing double duty: he knew what was what about ships and what was what about art; he knew where to find the right artists and how to get on with them; and he knew how to take and delegate responsibility. He believes that in a large company one director should be responsible for design policy (committee designing inevitably leads to dismal compromise) and that having chosen a designer, he should trust him and interfere with his work as little as possible.

This system proved so successful with the *Orion* that the collaboration between Anderson and O'Rorke has been continued in later ships; the *Orcades I* (sunk in the war), the *Orcades II*, and the *Oronsay*, now nearly completed, as well as a new office building in Sydney. In addition to the artists already mentioned, work was commissioned from Edward Bawden, Ceri and Frances Richards, Humphrey Spender, John Hutton, John Armstrong, F. H. Coventry of New Zealand, Douglas Annand of Australia. . . . New materials and new techniques were employed, old ones used in new ways.

The salient characteristics of the new interiors are ship-likeness (it is, after all, exciting to be in a ship, so why pretend to be elsewhere?), simplicity, gaiety, and a tropical flavour appropriate to the routes travelled. Gone are the mausoleum splendours of the state-rooms: they are now called *flats*, and look like flats—agreeably modern, not absurdly palatial. The bar is unpretentiously *gemuetlich*, as a bar should be, but without recourse to Tudor beams. And pictures by young artists are hung on the walls as they might be hung by a private collector.

As one might expect, Sir Colin is himself a collector, specialising in British painting of the nineteenth and twentieth centuries. His interest in art extends further: he is Chairman of the Council of the Royal College of Art, on the Arts Panel of the Arts Council, honorary treasurer of the Contemporary Art Society, President of the Design and Industries Association, and recently he has been appointed by the President of the Board of Trade a member of the Council of Industrial Design. The other half of his life is represented by four directorships and many offices connected with shipping—from the Chairmanship of the International Chamber of Shipping and of the National Association of Port Employers downwards. He is a past President of the Chamber of Shipping of the United Kingdom. Asked how he fits all this in, he answers: "Natural phlegm; I never concern myself with details"—and then, as an afterthought, he adds "except those of design!"

Contemporary equivalents of state-room and steerage. On left is the drawing-room of one of the "flats" which have superseded state-rooms as the most luxurious accommodation in current Orient Line ships. The pictures, in this example, are fabric collages *by Margaret Kaye. On right, Tourist B class dining saloon in the reconstructed* Orion. *Good design is not regarded as a luxury, for first-class passengers only*

Designed in Britain for Buenos Aires

THE SIGNAL CONTROL BOARD shown below has been designed and made in England for installation in the biggest granary in South America—the New Port Granary, Buenos Aires. Its purpose is to enable two men to oversee all operations in this large and complex group of buildings, controlling the work of machines directly, and of men through sound and light signals. The board is 28 feet long and nine feet high. It has 2,200 outgoing terminals and 445 red, amber and green indicator lamps.

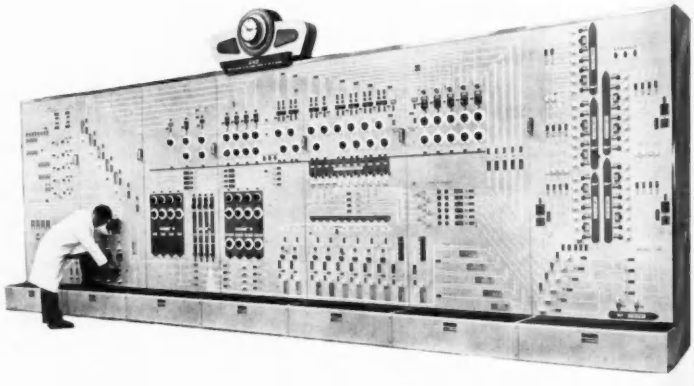
However, it is not mere size or complexity that makes the control board interesting, but the thought given to its design and the logical way in which its designers have used a variety of materials. Design and detailed working out required 6,200 man-hours of drawing-office time, in addition to 2,000 man-hours for the circuit layout. The panel is in effect a mimic diagram of the layout of the granary, with the main items of mechanical equipment represented by pictorial symbols. On the left-hand panel are indicated the barges, railway trucks and road vehicles by which grain comes in; on the right are the ships which carry it away across the Atlantic. In between is shown diagrammatically the system of elevators, conveyors, weighing, drying and cleaning plant, silos for storage, and finally the quayside conveyors from which the grain is delivered into the ships' holds.

Control of this installation demands the clearest possible visual indicators; several kinds and qualities of grains are handled at once, and to mix them would be as embarrassing to the management, if not as dangerous to life and limb, as to divert trains on to the wrong tracks from a railway signal-box. Every consignment of grain has its own card or ticket in the control room; this ticket is inserted in turn into different slots in the board corresponding to the stages of progress through the granary. Insertion marks it with a code number so that its progress can subsequently be traced, if need be, from the sequence of numbers printed on it.

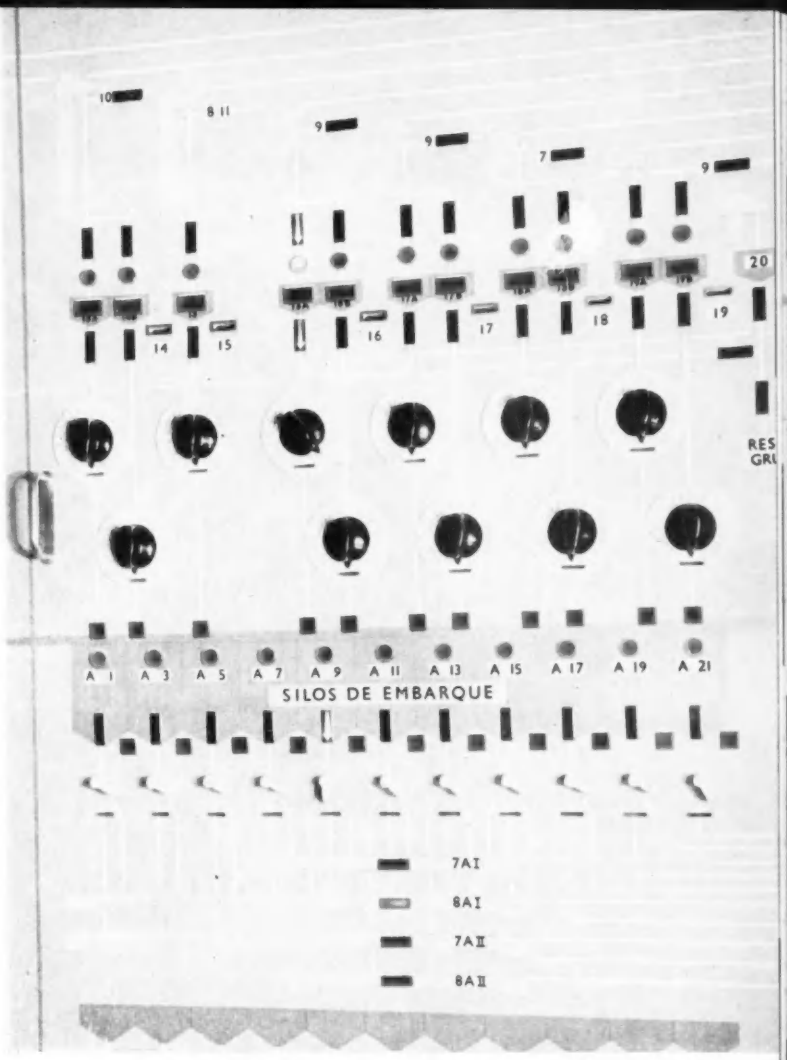
The board itself is a sandwich of Bakelite Laminated at the back, plywood in the middle, and Warerite at the front. Its designers have fully exploited the possibility of incorporating in the Warerite sheet a variety of patterns and colours—not, in this instance, for decorative effect but for efficiency of operation. It is by far the largest application of Warerite pictorial plastics in the electrical industry to date.

All mechanical equipment for the New Port Granary, Buenos Aires, is being supplied by Simon Handling Engineers Ltd, of Cheadle Heath. Sub-contractors for the electrical equipment are the General Electric Co Ltd, and the nerve-centre of the control equipment is this signal board, designed and made in their Wembley works, with GEC's Industrial Design Section advising on colours and certain other factors affecting appearance.

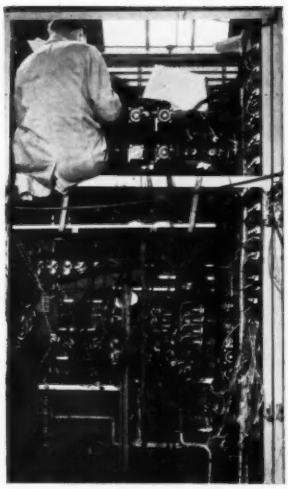
Surmounting a wholly logical arrangement of switches and symbols, the clock appears to be the only concession to an English idea of "flamboyant" South American taste

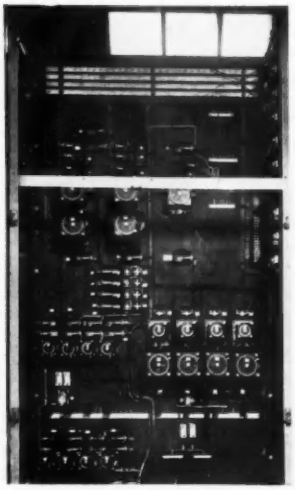


The control board is made in seven sections. The colour photograph shows the upper two-thirds of one of these sections. The four basic colours of the Warerite panel are all represented in it: pale bluish-grey for the background (rather more grey and less blue in normal lighting than in this photograph); a darker shade for the large symbol representing the *silos de embarque*; white for connecting lines; yellow for grain elevators (the vertical symbols at top of picture) and conveyors (horizontal, at bottom). The same shade of yellow is used for panels on which the main lettering appears—in a good reproduction of Gill Sans type, it will be noted



A group of silos is controlled from the small section of the board seen above. The large knobs—well shaped for turning—are cast in brass, stove-enamelled black; they were specially designed for the job. The indicator discs behind them are of white Perspex, with figures in black. Below the switches can be seen the slots into which control cards or tickets are inserted. (The squares are coloured-light indicators)





From chaos, order. Progress photographs on right show two stages in the wiring-up of typical sections of the signal board. Nearly 25 miles of wire were used altogether. The wire is covered in PVC, in contrasting colours for ease of identification, and part of the wiremen's job was to "tree" it neatly as in the right-hand photograph

Industrial design and

THE MACHINE TOOL

by Frank Burgess and Harold Sizer ⋆

ARE those who buy or specify machine tools influenced by appearance? Purchasers have long prided themselves on their practical evaluation of machine tools. They want facts, demonstrations of production rates, samples showing accuracy and surface finish, lubrication diagrams, material specifications, and assurances of long service life. Does appearance play any part in this practical appraisal? We believe it does, and one reason for this belief is the general reaction to the labour-saving finish used on machine tools during the war period. Too many man-hours were being used in filling and sanding cast machine surfaces. By painting directly on the cleaned cast surface, this time could be saved. The resulting painted surface was rough but highly practical. It had no influence on the production capabilities of the machines and they could still grind to tenths, remove as many cubic inches of metal, or drop off as many finished pieces per hour. But users did not like this rough finish, and we were soon explaining with the familiar plate, "Painted surfaces on this machine conform to orders of the War Production Board." As soon as restrictions were lifted, machine-tool manufacturers again were filling and sanding—proof that appearance is a factor which is not ignored by our practical customers.

A well-styled machine creates interest, and a buyer is ready to listen to the story of what the machine can do. The styling also can do a subtle but effective job in emphasising the features of a machine. If a concern is offering a powerful machine, sturdy and rigid, with a reserve of power for tough cuts, the styling can suggest these qualities, and by its presentation of masses create the feeling of power or strength. Similarly, if a small, light machine is being offered, which is sensitive and easily operated, the styling can subdue mass effects and suggest the light, responsive qualities it is desired to emphasise.

In machine tools the practical requirements of the design come first, and function is not sacrificed or compromised for appearance. If 1 h.p. is needed we cannot adopt a ½ h.p. motor just because it gives a more compact, better-proportioned appearance on the machine column. If a dust exhaust hood is bulky and its flexible hose an unwanted snake coiling around the machine, we cannot discard it to improve appearance. If the convenient working height of a machine table is 40in. above the floor, we cannot, like the artist painting bathing beauties, increase leg lengths to get more pleasing proportions.

An operator may admire the modern appearance of a machine but he is not willing to break his back eight hours a day for that appearance. Designers of household appliances may crowd their mechanisms into inaccessible corners to get a smart outer form, and automobile designers may crush a million hats to get that "fast-back" line, but in machine tools function is vital and sound engineering principles are not made to yield to aesthetics.

The supremacy of function makes the job of a machine-tool stylist difficult. In general, little can be done by a final face-lifting, and machines with afterthought ornamentation or "draped-on" effects show a lack of sincerity (Figure 1, p 10). The appearance so obtained is as apt to hurt as to help in the presentation of the machine. Good looks should be built in and should grow with the design.

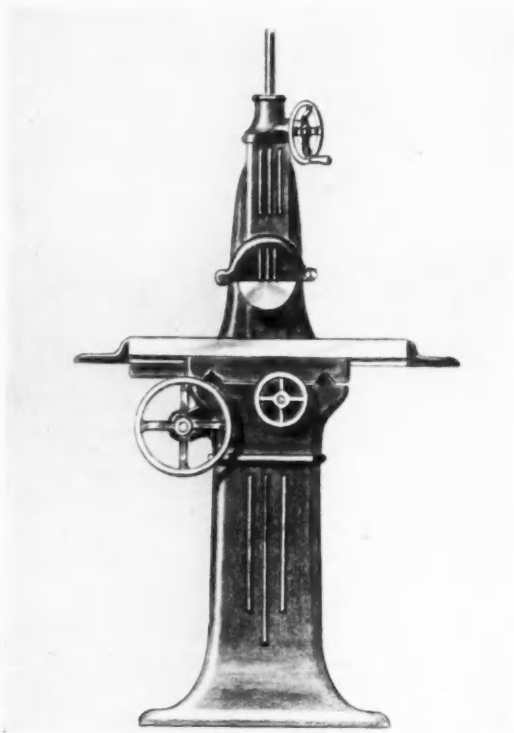
The appearance-designer should be in close touch with the technical designers from the start of a design. In the early, fluid stages of layout, there may be

continued on p 10

⋆ Industrial Designer and Assistant to Director of Design, respectively, with the Brown and Sharpe Manufacturing Co, Providence, Rhode Island. This paper was presented to the American Society of Mechanical Engineers on 20 September 1950 and is reprinted, by permission, from *Mechanical Engineering*, (Easton, Penn.) vol. 72, no. 10.

THE MACHINE TOOL can be defined, for DESIGN's less technically-minded readers, in this phrase used by C. F. Dunn in a recent article in *The Observer*: "It is a mechanically operated tool for working on metal—though a broader definition takes in wood and plastics as well." The present importance of machine tools was made very clear in the same article: "Without them engineers, designers and inventors would now be helpless. . . . Behind almost everything now made in factories there is a machine tool. . . ."

Recognising the importance of machine-tool design, we reprint in these pages a recent American article on this subject, with its original illustrations. These are all from American sources. The photograph above, on the other hand, is British: it shows a matrix jig borer made by the Coventry Gauge and Tool Co Ltd, used in the Standard Motor factory for making jigs, tools and gauges for production purposes, and for experimental work. *Illustration courtesy Standard Motor Co Ltd*



1: *"Afterthought ornamentation," draped on an existing design, fails to suggest high quality*

2: *"The block form is readily produced by fabrication or by casting": fabricated steel base on automatic pinion-turning machine*

several possibilities in the arrangement of a mechanism and in the grouping of mechanisms to form a machine. At this time the suggestions of the stylist can often be adopted, and the planned appearance becomes an integral part of the machine.

Block form

An expressive and useful design theme for machine tools is the block form. It is an easy form to manipulate and is readily produced by fabrication and by casting. Figure 2 shows an application of square and rectilinear forms. These forms have a stable appearance and combine well with cylindrical members, which are, of course, common in machine tools.

Edge radii

Sharp edges where two planes intersect are not practical in castings and may look "tinny" in sheet-metal or fabricated parts. In an effort to avoid sharp corners, some designers are apt to go too far and with generous radii change a distinctive modern design into a bulbous mass. Figures 3 and 4 give a simple comparison of a machine stand with two sizes of radius; the design using the small radius has more character.

Corners

Die and tool charges must be kept low for machines manufactured in small lots. Since spherical corners or areas of compound curvature cannot be fabricated without dies, it is well to avoid such corners. Figure 5 shows possible designs where cylindrical rather than spherical forms are used.

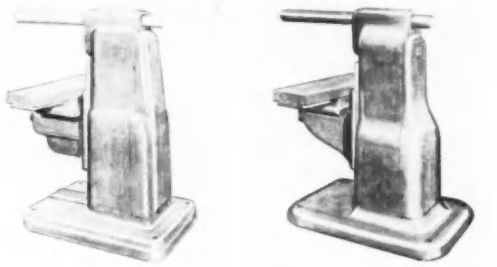
Hiding under a bushel

Although the block form is useful, a designer must guard against the tendency to wrap everything in rectangular packages. From long association we have learned to identify many machine members with a specific form. It is poor design to hide these well-known forms under a box. Thus hidden, distinctive functional mechanisms lose their identity and take on a monotonous similarity to too many products of industry. An electric motor has an easily recognised cylindrical form which through the years has evolved from the economical use of metal. Why wrap the motor in a box or hide it under a bushel? It has a familiar, pleasing appearance; let it stand out and be recognised. In 6 a headstock makes no attempt

to hide its brake motor, and gains character by its forthrightness.

Another familiar unit in toolrooms is the dividing head, 7. The head has a characteristic appearance, and a glance suggests the movements of which it is capable. Making a block of the dividing head would disguise its functions and add another "contents unknown" package to the machine.

Although the block form can be used effectively on machine tools it should be used with restraint. Keep in mind that people do not want a coffee-pot to look like a tea-pot, and that trouble follows when the salt shaker looks like the pepper shaker.

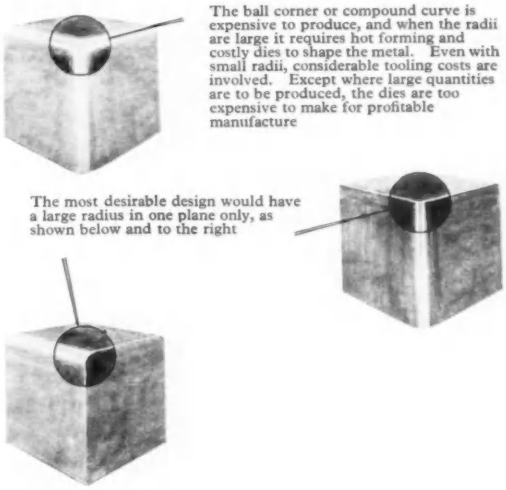


3; 4: *Larger radii can give a block an unpleasant, bulbous appearance (right)*

Flutes and ribs

The beds and bases, columns and uprights of machine tools are generally made of cast iron, and thus good casting practices dictate many of the rules of appearance. Flutes or ribs are not very practical in large castings: an excessive amount of time is used in correcting or replacing them when they are distorted or lost in casting. Large castings cannot be scrapped just because an ornamental flute is imperfect. To avoid salvage work, leave flutes and ribs off the large machine castings.

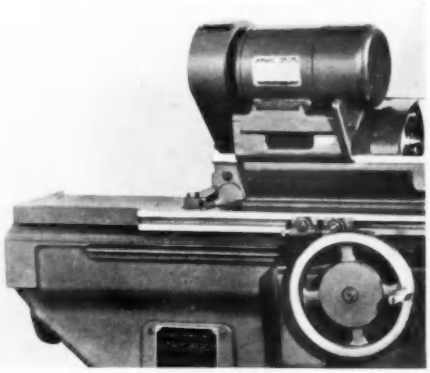
If ribs or flutes are to be used, they should be applied to the smaller or secondary units rather than to the main castings. On covers, plates and doors, ribs are less likely to be deformed when moulded and, if defective, the pieces can be replaced without serious loss. Ribs, especially when in a contrasting finish, are distinctive, dignified and in keeping with the geometric forms used on machine tools. However, it is suggested that ribs be used only if they make a positive contribution to the appearance of a machine. By making two illustrations, one with and one without ribs, a designer can usually make a decision. If it is hard to decide—leave off the ribs.


The ball corner or compound curve is expensive to produce, and when the radii are large it requires hot forming and costly dies to shape the metal. Even with small radii, considerable tooling costs are involved. Except where large quantities are to be produced, the dies are too expensive to make for profitable manufacture
The most desirable design would have a large radius in one plane only, as shown below and to the right

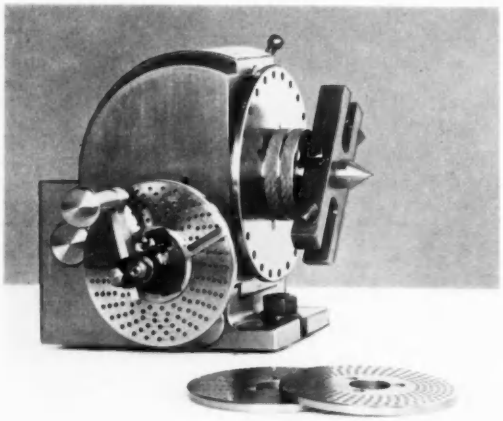
5: *Fabricated corners*

Flush-type covers

The designer will find little need for ribs and flutes if he has taken advantage of functional members of the machine as a means of providing visual interest. There is little logic in using flush-type covers or compartment doors throughout the machine, with all the additional expense of manufacture and assembly, only to embellish them or other parts of the product with "speed lines" to retrieve some of the character which was so deliberately suppressed. Ease of cleaning may justify the smooth unbroken surfaces obtained with flush-type covers, but ease of cleaning will *not* support the use of flutes or protruding decorations.



6: *Let a motor look like a motor, as it does on this grinding-machine headstock. "It has a familiar, pleasing appearance"*



7: *Function dictated this form for the dividing head. Its appearance suggests the movements of which it is capable*

Figures 8 and 9 suggest that a large surface can be improved in appearance by getting away from flush-type covers.

Extensive unbroken flat surfaces detract from the appearance of a machine. Since flush-type covers often make large flat areas possible, they are not helpful in designing a machine. In general, a designer should try to break up large flat surfaces. A broad band or panel elevated or relieved, relative to the normal level of the surface, will improve conditions and will also assist in camouflaging any unsightly irregularities which appear in castings and cannot be hidden by filling and painting. It is also possible to avoid flat areas by letting the case follow more intimately the enclosed mechanism, neither pursuing function too closely nor departing too far from it.

Matching castings

In the drive to get smooth surfaces, designers often call for matched castings so that the surfaces of two adjacent castings will appear as one. Here we must face up to rough reality: in practice the surfaces will not blend or match, and it is necessary to accept a noticeable and uneven intersection or pay the serious costs of chipping and grinding.

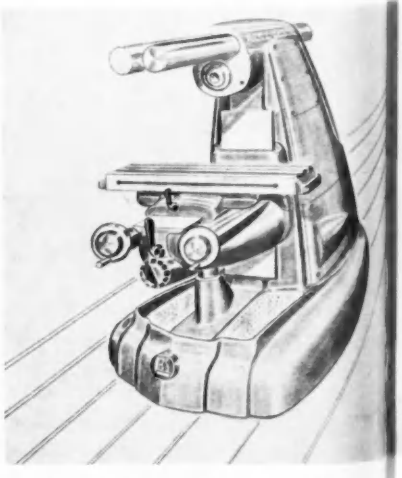
It is a much more practical approach to design to call for a deliberate step or break where castings meet. Casting variations will vary the height of the step but will not have a glaring effect on appearance, nor will they require added or corrective machining.

"Streamlining"

Having agreed that function is of first importance in the design of machine tools and having been trained as engineers to know the purpose of streamline forms, we have little temptation to streamline machine tools.

8: *A large surface can be improved in appearance (as above) by avoiding . . .*

9: *. . . flush-type covers, which are costly and often create undesirably large unbroken areas*



10: *Misapplied streamlining: "a machine tool stays put . . . there is no reason why high speed should be suggested"*

The purpose of streamline flow is to reduce resistance to motion; thus the forms which best accomplish this have become associated with high speeds. A machine tool stays put; indeed, it is often anchored to a floor of concrete, and there is no reason why capabilities of high speed should be suggested (as in 10).

Occasionally one of the units of a machine tool can make valid use of streamline forms. Such a unit is the high-speed internal grinding attachment (11). The nacelle or housing can be streamlined gracefully, and the suggestion of high speed is appropriate, although the movement is rotary rather than forward.

Flat pads

One of the most aggravating sights in machine tools is the appearance of bosses or recesses framing every screw used to fasten auxiliary parts to the machine frame. There seems to be a common belief that holes cannot be drilled into a surface unless the axis of the hole is absolutely perpendicular to the surface. Even the slightest angle or curvature of surface provokes the use of a flat pad, elevated or depressed beyond the normal surface, as though the screw head were something sacred, to be pointed out as the most important member of the machine. Figure 12 shows the unpleasant outline of an irregularly shaped pad on the outer surface of a cover.

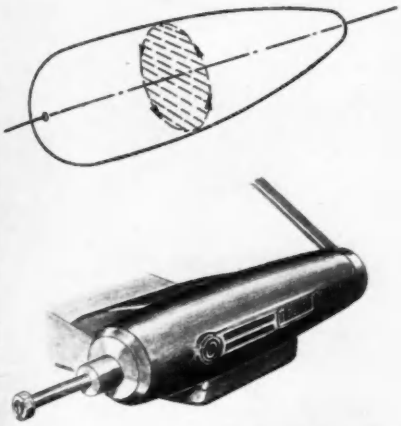
The engineer might also be warned to be aware of the spotty appearance resulting from numerous individual pads and bosses. For example, the bosses and pads shown in 13 might just as well have been made into one.

Nameplates

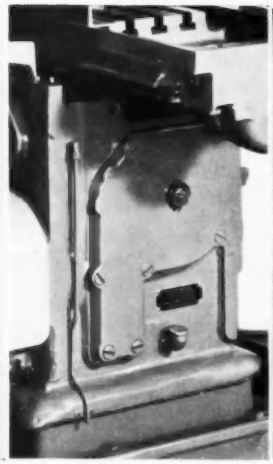
Nearly every machine carries some sort of nameplate or identification. It also calls for other plates with instructions for operation, patent-number plates and much other data. Some of these markings must be made visible. They can fulfil their intended function and at the same time be an attractive accessory instead of a necessary evil. No portion of the machine should be converted into a signboard. The manufacturer's name should be located prominently and by itself, and not forced to share attention with a long address or with a list of patent numbers.

★ ★ ★

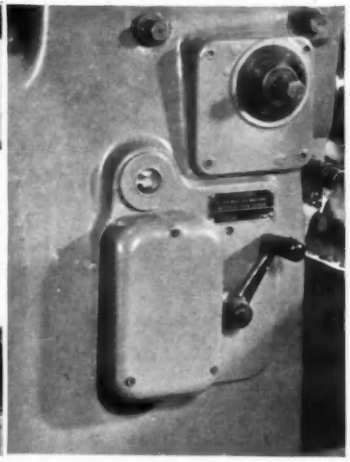
Machine tools offer considerable resistance to the designer and cannot be considered ideal material in which to express his artistic feelings. The appearance of the machine can never be expected to instil in the beholder an insatiable desire for possession. However, there is no reason why a machine should appear awkward or ugly. Appearance can be made a natural or basic part of the machine and can contribute quietly in the presentation of the machine as a precision product, a master tool created to do an exacting job quickly. Let appearance help to portray function.



11: *The streamline sweep of this internal grinding attachment housing gives the suggestion of speed which, the authors consider, is appropriate here*



12: *Pads can place an unwanted emphasis on screws and fastenings*



13: *Pads and bosses which, though close together, are separate, cause a "spotty" appearance*

Industry and Government co-operate

Through the National Industrial Design Committee, Canadian manufacturers, designers and Government are promoting better design in the Dominion's industry

by D. W. Buchanan ★

TO ENSURE "that Canadian enterprise in manufacturing and industry be given that intelligent and native collaboration in designing services which it deserves": this is the aim of the National Industrial Design Committee, formed in Ottawa in 1948. The Committee is composed of some 30 Canadian manufacturers, retailers, designers, research and educational officials. Its projects include scholarships for students in product design, the publication of booklets, and a survey of design requirements in Canadian furniture manufacturing.

Its members consider its recent competition for new designs in wood and aluminium to be its most important venture to date. They reason that the Committee, through its successful financing of this competition, has demonstrated that Canadian industry is willing to share with government the costs of promotion and research in this field. The Canadian Lumbermen's Association and the Aluminium Company of Canada each donated $2,500 towards this particular project; these sums, added to $5,000 from the National Gallery of Canada, made a total sufficient to allow handsome prizes, which in turn attracted widespread participation in the contest by architects, engineers, factory technicians, students and aspiring designers. Next year it is hoped that the plastics industry will come into a similar competition on the same terms.

The National Gallery of Canada has taken an important part in this movement from the beginning, helping to arrange the tour of the first Canadian industrial design exhibition in 1947. As a result of the interest aroused, enquiries for additional displays and other material began to come into government departments in Ottawa, and to handle such requests properly, the government decided that industrial design information services should be concentrated in an office under the control of the Board of Trustees of the Gallery. By order-in-council of 19 April 1948, the cabinet authorised the formation of the National Industrial Design Committee to co-operate in this work.

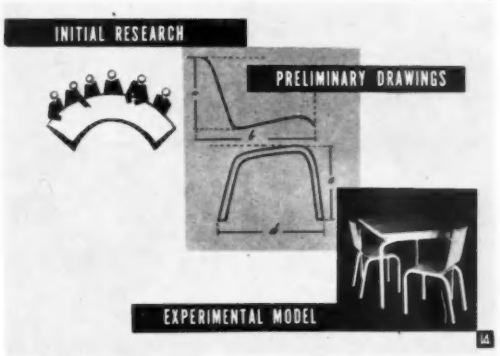
The reasons which prompted this enterprise were threefold. 1: Canadian manufacturers were spending large sums of money, in United States funds, in fees to American designers or in the purchase of American designs. 2: European countries were placing increasing emphasis on better design in goods for export, with a resulting effect on Canadian trade decisions. 3: It was becoming obvious that the importance of certain United States imports into the Canadian market, particularly in furniture, radios, ceramics and kitchenware, bore a definite relationship to consumer demand in Canada for improved designs.

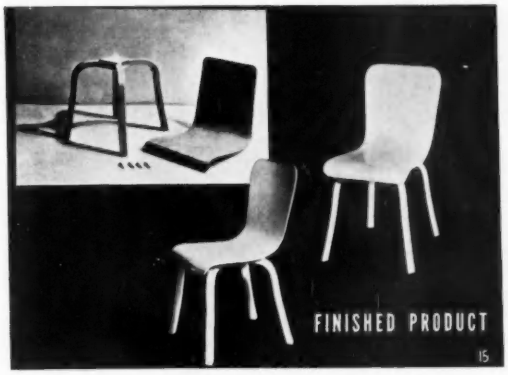
Those who attended the initial meeting of the Committee elected Donald B. Cruikshank, representing the Canadian Manufacturers' Association, as the first chairman. Sub-committees on training and scholarship and on publicity and promotion were formed, which met during the summer of 1948 and formulated basic policies. Attempts were made, by discussions between members of the Committee and university

★ Secretary of the National Industrial Design Committee and Chief of the Industrial Design Section of the National Gallery of Canada.

The "Design Centre" at the Canadian National Exhibition, 1948—a demonstration kitchen made up from working units all designed in Canada

Two frames from a film strip, Better Design in Canadian Products, *produced by the National Gallery in co-operation with the National Industrial Design Committee, and distributed to technical schools across Canada*





authorities, to promote the establishment of a course in industrial design on an advanced level. The report on educational policy was approved in 1949:

> The Committee agrees that a professional training for industrial designers on a university level is still needed, but as this appears not to be a practical possibility at the moment, we believe the present industrial design scholarships . . . should be continued indefinitely. We believe too that we should assist the work of the Ontario College of Art * as well as the programme of co-operation that has been outlined between that College and the Ryerson Institute of Technology, Toronto, provided the entrance qualifications are senior matriculation and that some method is worked out so that the course is put on a comparative basis with leading schools elsewhere.

The scholarships were five awards of $1,500, made available annually since 1948 by the National Gallery to graduates of Canadian universities and schools of design to enable them to take advanced studies abroad. Four holders of these scholarships have completed special courses at the Institute of Design in Chicago and returned to Canada, qualified to practise. In the words of one of them: "The contemporary profession of industrial design has moved into broader fields, in which research to meet future needs becomes of equal importance to creating changes in design to increase immediate sales."

This point of view appears also in the survey of design needs in the furniture industry conducted for the Committee during 1950–1 by John H. Low-Beer and James E. Ferguson (summarised in DESIGN No 21, p. 25). As the first factual study in Canada of the

* This refers to a pioneering venture by the Ontario College of Art in giving industrial design training to students on an art-school level.

effect of design on the stability and prosperity of industry, this survey is being discussed and studied not only by furniture companies but by leaders of other industries who seek information on how their design problems may be analysed. While the furniture survey was financed wholly from government funds, the National Industrial Design Committee is now proposing to other trade groups, such as the stove and furnace manufacturers, that the cost of any future studies be halved between government and industry.

Other projects directly inspired by the Committee have been many. A booklet, *How the Industrial Designer Can Help You in Your Business*, was printed for the Committee late in 1949. Certain existing Canadian products of merit were described and a careful explanation was given showing how each of them had originated through successful collaboration between designer and manufacturer. The facts given in this booklet have since been instrumental in persuading a number of firms to seek design advice and services for the first time.

Articles by members of the Committee have appeared in publications as diverse as *Canadian Business*, *Canadian Art*, *The Canadian Woodworker* and the *Journal of the Royal Architectural Institute of Canada*. At present, the executive of the Committee is composed of W. A. Trott of Winnipeg (chairman) and D. S. Strudley of Stratford and Jean Raymond of Montreal (vice-chairmen)—manufacturers respectively of lighting equipment, household furniture and aluminium hardware.

The establishment in 1948 of a professional society, the Association of Canadian Industrial Designers, has been of great help in encouraging firms to work more closely with designers.

The movement is not being promoted solely from above by a few enthusiasts, but has active local and regional disciples. This was recently demonstrated when a British Columbia Industrial Design Committee was formed. It has adopted an ambitious programme which includes the holding of regional design exhibitions, the presentation of lectures on product design at the Vancouver Technical School, collaboration with local manufacturers regarding design requirements, and the circulation in British Columbia of booklets and displays.

Both in Ottawa and in Vancouver the emphasis has been on better design in mass-produced articles. The related field of package design has not been neglected: last year, executives of firms manufacturing containers and members of commercial-art firms came together to form a Canadian Packaging Design Committee. This group has already raised, from its own members, enough money to sponsor an important package design competition open to students in Canadian art colleges.

Much of the interest in this movement for better design can be traced back, as has been said, to the touring exhibition of 1947. Since then, other travelling exhibitions have been sent out by the Industrial Design Division of the National Gallery and an important "Design Centre" display was erected two years ago at the Canadian National Exhibition in Toronto. The Committee also presented a display at the International Trade Fair in Toronto last year.

Other museums are beginning to follow the lead of the National Gallery. With financial help from Ottawa, the Royal Ontario Museum in Toronto opened, this January, an exhibition which gives the first historical and international survey of art and industry ever to be held in Canada. This exhibition

This cast aluminium "combinater" is a relatively early example of good design in Canadian industry —introduced in 1927 by Super Health Aluminum Co Ltd, Toronto, and still in production

was built with demountable aluminium stands so that it can be transported; the National Gallery will present it in Ottawa and then distribute it to galleries in other cities.

The last three years have been devoted largely to arousing industry to the significance of the slogan "Good Design Can Sell Canadian Products," and proving to manufacturers that it is possible to obtain worth-while collaboration from Canadian designers. Many problems have still to be surmounted.

It is not only in the furniture industry that (in the words of the survey above mentioned) "in the development of design it has been the practice of many firms to follow, as closely as it is possible to do so in their particular business, the styles produced by manufacturers in the United States," or that "manufacturers visit . . . trade exhibitions held in the United States, they purchase samples there and reproduce them in Canada, either exactly or with slight modifications in the design." One reason, the survey adds, is that "national advertising of furniture in the United States is much greater now than formerly and the magazines and other periodicals carrying these advertisements are widely read in Canada. These advertisements are closely studied, as are also the articles which appear in these publications on how to furnish homes. These magazines are even carried to the stores by consumers when selections for purchases are being made. . . ."

Such are the problems peculiar to Canada as a North American nation. In facing them, the Committee has asked Canadian industry to remember that, as far as education in product design goes, "Canadians can and should be prophetic in vision as Americans are." More intensive collaboration with designers is needed throughout Canadian industry if Canadian goods are to continue to develop the high standards of design essential to lasting success in domestic and world markets.

Canadian-designed furniture shown at the National Gallery, Ottawa. Chair on left is experimental; all other items are in production. Exhibition designed by George Englesmith

Interest in good design is not confined to the home furnishing industries. Photograph on left, from the Canadian Design Index, shows a sight-seeing bus with bodywork specially designed and made for Rocky Mountain Tours Ltd, Banff, by Western Auto and Truck Body Works Ltd. (The Design Index is a selective file—in photographic form—of well-designed Canadian products. It was set up under the auspices of the National Gallery of Canada)

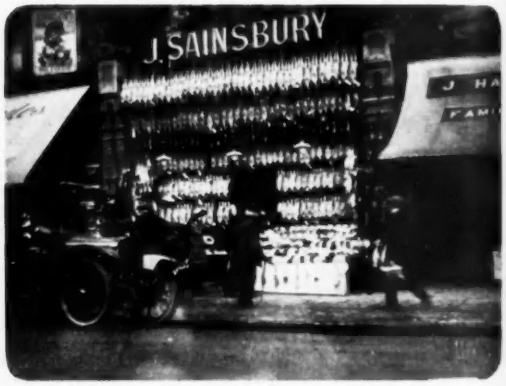
DESIGN IN FOOD MARKETING

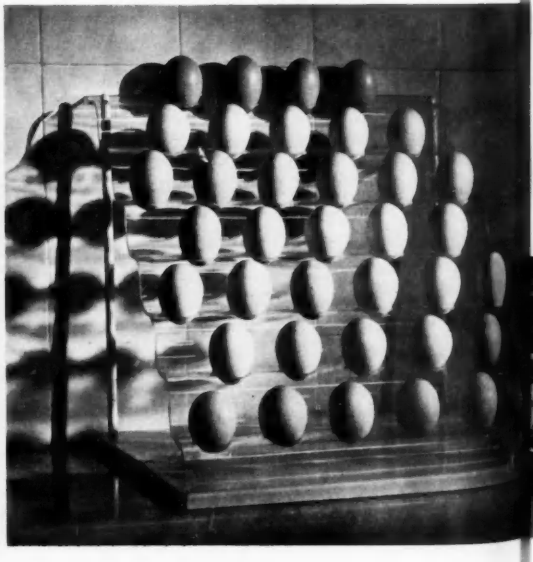
New display, packaging and printing reviewed by the Editor

1: Sainsbury's keep abreast of the times

The two displays of poultry, on the right and below, are separated by more than the distance between them in space (Watford to Croydon) or in time (1911 to 1951). They belong, in the history of shopkeeping, to two different eras. *Then*, whole birds—and plenty of them—were exposed outside the shop to every passer-by and to every wind that blew. *Now*, dismembered portions of birds, weighed in advance and price-ticketed, glisten in their airtight transparent wrappings, in the refrigerated cabinets of a self-service store. The changes of 40 years are not all for the better; but at least the goddess Hygeia is more often remembered and respected today.

Fittings specially designed for Sainsbury's first self-service store include the egg-stand—basically a sheet of corrugated Perspex, perforated and mounted at an angle—and the open-topped display cabinet (with Kelvinator refrigerating units) for game and poultry: both made by J. Sainsbury Development Engineers.





2: Self-service display

Nowhere is package design more important than in the self-service store, where the customer makes her own selection of the things she wants to buy—and the selection is chiefly determined by *what she sees.*

The strong points and the weak points of familiar packs become very evident when they are seen side by side on a gondola (island display counter) as on right. This unit was designed especially for self-service stores by its manufacturers, Dunstable Showcases Ltd. It is made in Formica.

3: For New Berry, a new pack design

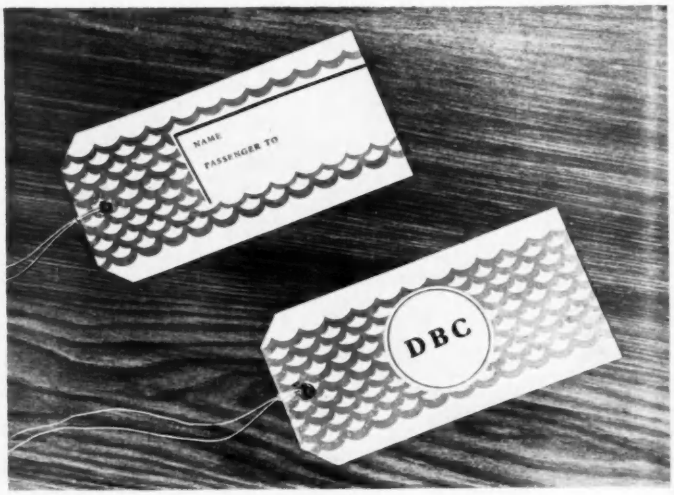
Pack for Meltis *New Berry Fruits* before (left) and after redesign by Richard Lonsdale-Hands Associates. In the new design, the colours are red for centre panel and fruits, and pastel green for the background pattern of leaves. The new package, like the old one, is a Pearlite box, made from wax-impregnated board—a valuable protective material whose slightly greasy off-white appearance is rendered less conspicuous in the new design because a smaller proportion of the surface is left unprinted.

4: St Ivel: The emphasis is on display value

Bold, stocky lettering has been used, for the sake of greater display value, on the new packs for St Ivel products, designed by R. H. Talmadge, MSIA. Trade reaction to the first of these packs (ice cream) is described as "very favourable."

The desirability of redesign is evident when a typical fish-paste label of the "before" era (below, left) is compared with a similar label of today.

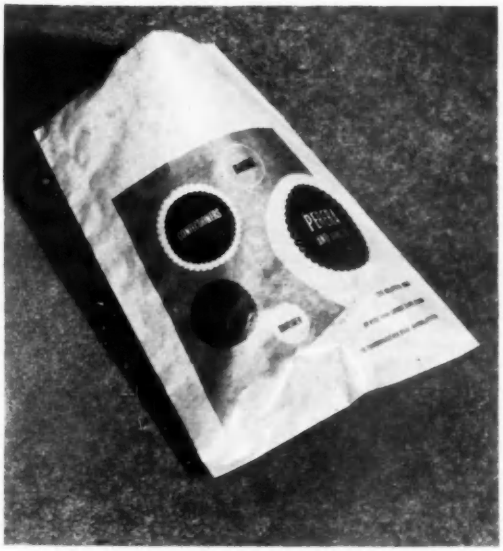
5: Importers follow a design policy



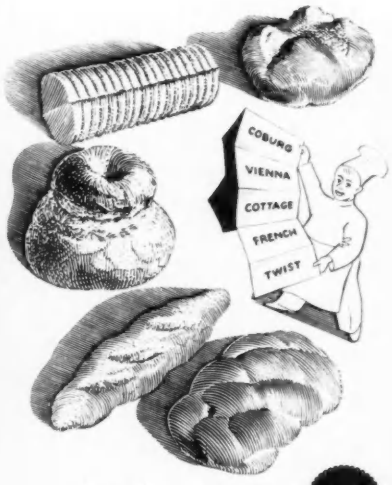
The Danish Bacon Company was well known in pre-war days for its higher-than-average standard of design. Latest manifestation of its design policy is this printed matter, all designed by George Colle.t, MSIA. Above left, a fibreboard container used for sending stock to retailers (made by M. Cook and Sons, Hatfield; gummed tape by Samuel Jones). Below, round box and individual labels printed in Denmark for *Maid Marian* cheese—a recent addition to the range of DBC products. Above, luggage labels specially designed to make the luggage of visitors from Denmark to the British company easy to identify: an example of design as "applied imagination."

6: Designed in London to sell in Ceylon

"Design at a distance" summarises the work which H. A. Rothholz, MSIA, has been doing in London for Perera and Sons Ltd, bakers and confectioners, of Colombo, Ceylon (commissioned through their agents, Gilbert and Richards Ltd). It has included the design of a trade-mark; cartons and bags for cakes, sweets, potato crisps; cinema slides, price lists, advertisements. Illustrations show: right, one of several types of Perera bag (printed by E. S. and A. Robinson Ltd); below, right, Christmas folder; below, press advertisement with scraper-board drawings by B. Sands; foot of page, an ice-cream tricycle for which Mr Rothholz has designed the lettering and colour-scheme. As in the printed matter, two "house" colours—chrome yellow and deep blue —are used. The trade-mark also gives a family resemblance to all the items.



R. H. Talmadge (p 19), George Collett (opposite) and H. A. Rothholz (this page) were all commissioned from recommendations by the Design Advice Section, Council of Industrial Design, to the manufacturers concerned



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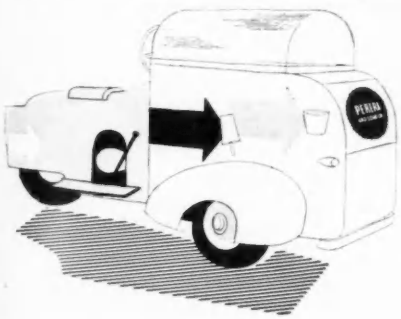
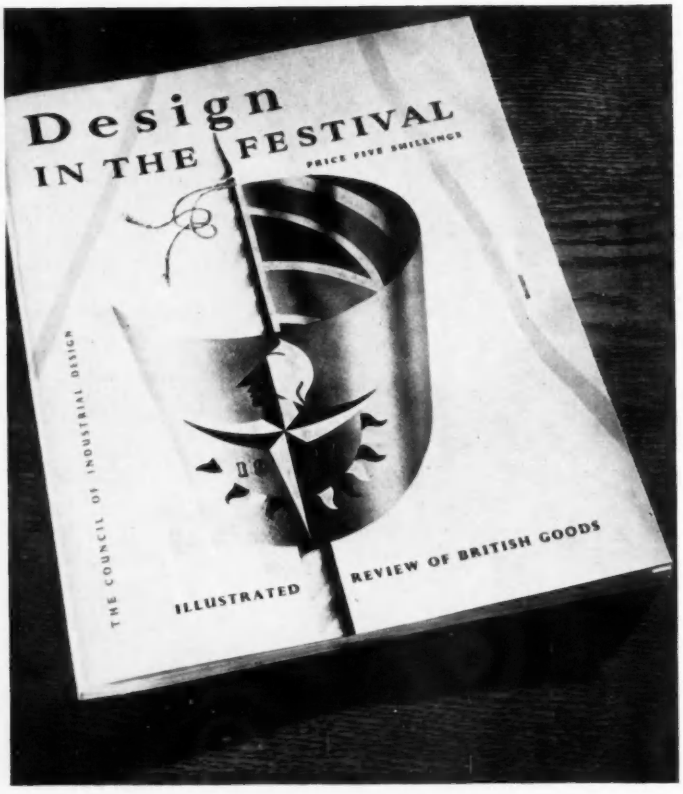


Design IN THE FESTIVAL



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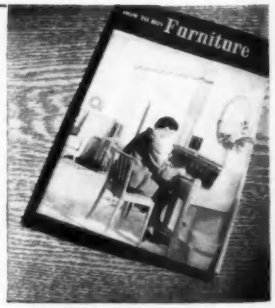
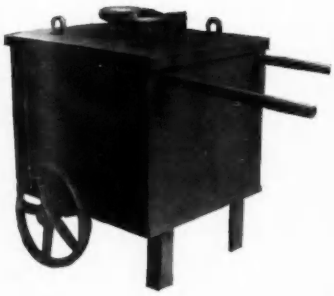


TRANSFORMER—TWICE TRANSFORMED



1937

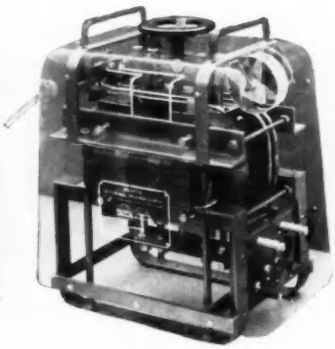
1 Square case, iron wheels, angle-iron feet and tubular handles characterised the prototype *Monta* welding transformer as made in 1937 by the Arc Manufacturing Co Ltd. This portable transformer was intended for sheet-metal work, repair work and welding on the building site. It had infinitely variable current control and the current setting was shown by a calibrated stick protruding through the top of the case. Later development has improved the appearance of the machine and made it more convenient in use—as the later pictures on this page show.

1938

2 In this first production model, chassis and case were combined—a patented construction which reduced the weight so much that wheels were unnecessary. Discarding them (and the feet and handles) effected a further reduction. The transformer could now be lifted by one man, and easily carried by two. The current indicator was protected, inside the casing—whose shape made the *Monta* easy to distinguish from competing makes. More than 6000 were sold, in many countries; for several years, "wartime finish," with battleship grey paint, was standard.

1947

3 Overseas customers commented unfavourably on the drab finish, and this was superseded by dark crimson cellulose. But the makers realised that something more than skin-deep beauty treatment was needed after 10 years' production without change. They consulted one of their overseas agents, asked what technical improvements he thought necessary to enable the *Monta* to meet all competition, and incorporated them in the model seen here. Most conspicuous change was the use of an easily-read drum scale instead of the former vertical scale.



4 The earlier design was so well known among users that the makers were understandably reluctant to make drastic changes in the appearance of the transformer. But they realised that the grafting of new improvements onto the old form could only be a temporary measure, and introduced this completely re-designed model. That the smooth lines of its cover have been achieved without any waste of space inside is evident from the "transparent" view above. The current indicator has been placed where it is most easily seen by the welder—at the end of the machine from which the welding cables go out.

5 Commercial success has justified the manufacturers' courage in making a break with the style of their earlier models. The standard transformer (with a range up to 200 ampères) is supplemented by the heavier machine (above: up to 300), which has recently been redesigned on similar lines.

INDUSTRIAL DESIGN ABSTRACTS

Armaments: "The Development of Tank Design." The interlocking of the designers' technical problems with the demands of the General Staff is outlined in a review and summary of a lecture on "The Influence of the Late War on Tank Design," by Brigadier O. E. Chapman, Inspector of Fighting Vehicles. *Engineering*, 8 December 1950.

Carpets: "Mid Century Carpet Design," by M. W. Tomkinson. Since the war the export markets have determined the type of design manufactured and, owing to the need for long runs, only a limited range of these patterns have been made. Consequently the demand, particularly from the Dominions, for the popular florals of the 'thirties has limited the degree of experiment possible. Australia's taste has been both extreme and conservative: designs of the 'twenties have been in great demand but vividly and strikingly coloured. South Africa has wanted a modified form of these patterns, while New Zealand's taste has approximated more to the English. The most popular carpet in the States has been in "carved" effects in pastel shades. Taste in Europe is very different; distinct styles are needed for Switzerland and Scandinavia. *British Furnishing*, 3/1950.

Ceramics: "Design—The Role of the Small Pottery," by Joseph Albert. The small pottery can introduce new designs with comparatively little risk owing to its small investment in moulds and equipment. It therefore plays a large part in influencing public taste. The renaissance of "handcrafted" pottery which is taking place in California is forcing the large American factories to new lines that are fresher and more contemporary in "style and utility." To show that attention to design is vital for economic production, the author gives a detailed analysis of the process by which he produced a dinnerware design suitable for his pottery with a minimum of equipment and no experienced labour. *Ceramic Bulletin*, Columbus, Ohio, November 1950.

(An Englishman's impressions of American craft potters are given in *Craft Horizons*, New York, Winter 1950, by Bernard Leach. He comments that: "Of the 70,000 non-industrial potters in the US, hardly any serious craftsmen can make a living by potting alone.")

Cutlery: "Modern Cutlery, Spoons and Forks," by Mervyn Thomas. A review of the designs most readily obtainable today in cutlery and tableware. Although much of the work is reproduction, there is a good market for modern styles (which are described in detail).

Buyers from the dollar countries are showing an interest in obtaining dies. *Argentor*, December 1950.

Decoration: "L'Ornement et le Puritanisme Moderne," by Emile L. Henvaux. The elimination of ornament from modern architecture and other works springs from an economic and not an aesthetic motive—a desire for "efficiency" and to give no more than one has been paid for. Ornament sprang from a delight in invention and a spirit of generosity. But although it is frowned on in this age of the scientist, and is no longer used on lasting works, ornament still graces the ephemeral and the quickly-discarded. *La Maison*, Brussels, No 12/1950.

Electrical Appliances: " Design of Domestic Appliances." A letter to the editor suggests that domestic electrical appliances are tied too closely, in design, to non-electrical. It is suggested a more logical design for the electric kettle, for instance, would be a cylindrical container fitted with a draw-off tap and standing on three short legs. *Electrical Review*, 12 January 1951.

Engineering: "Machine Design as a Career," by J. F. Downie Smith. The prospects of an engineer in the field of machine design in America are fully discussed. In the past, America has relied on Europe for many skilled men, including designers; during the war the shortage was revealed and progressive large organisations now train their own designers. The graduate engineer is reluctant to choose design which ties him to the drawing-board for a period; but it is pointed out that there are increasing openings in management for engineers and that first-hand experience in design is invaluable at management level. *Mechanical Engineering*, Easton, Penn., December 1950.

General: "The Seed of Doubt," by Odd Brochmann. This Norwegian architect has begun to have doubts about the work being done by Svenska Slöjdföreningen, *Form* and other institutions. He has had enough of all these pictures of pottery, bowls and chairs, with more or less instructive explanations or analysis. He thinks these articles fail in two points: they praise what is *en vogue* and might criticise the same thing tomorrow, when it is *passé*. And instead of giving information about "good form" they lose themselves in search of originality.

In 1880, when mass-produced, often horrible objects inundated the world, some wise men got together and reacted against this evolution. They created museums for art and craft and tried to stop the current flood of bad taste. But these men forgot the simple industry product, and—in Mr Brochmann's opinion —their intervention was reactionary.

The author is "tired of *things*." He feels as if they owned *him*. He likes his old cottage because there is nothing beautiful, nothing original in it; every piece of furniture only does its duty.

This fur-covered chair bed is an Italian design by Gian Case, made in Brazilian rosewood, with brass ferrules: an illustration from Esempi, *a series of volumes of illustrations of contemporary furniture edited by Roberto Aloi of Milan—noted in* DESIGN, *No* 19, *p* 27

Contemporary aesthete. One of Odd Brochmann's sketches from his article in Form, *summarised here*

The owner feels free and secure with this furniture.

Editor Hald, in answering the letter, says that he is almost of the same opinion as regards the proper way of life, but points out that even simplicity needs a medium of propaganda. *Form*, Stockholm, No 7/1950.

General: "Italian Shopping Trip," by Walter Dorwin Teague. An account of a 3,000 mile tour through Italy in search of contemporary products suitable for exhibition in 12 major United States museums; 2,500 items were selected—mainly craftsmen's work—and many are illustrated. *Interiors*, New York, November 1950.

(A large part of *Domus*, November/December 1950, is given up to illustrations and descriptions of furniture, glass, pottery and other products selected for the touring exhibition mentioned above—which is enthusiastically reviewed in the *New Yorker*, 13 January 1951.)

Heating and Cooking: "Domestic Solid Fuel Appliances, 1900-1950," by John Pinckheard. Developments in cookers, open fires and stoves are detailed. *Architect and Building News*, 19 January 1951.

Packaging: "Scientific Packaging." The packaging of aircraft components to the necessary elaborate specifications requires design "in the broadest sense of the term." Methods and types of cases evolved by the main specialists in this field of packaging provide case-histories in the solution of many problems of large-scale packing. *Aircraft Production*, December 1950.

Prefabrication: "Ingersoll's Utility Unit." Ingersoll Steel Division of Borg-Warner has withdrawn from the market its bathroom - kitchen - furnace - unit, launched "with much loving care" in 1946, after an analysis of more than 200 building codes to make the Unit design acceptable. One of the major reasons for sales resistance was the inflexibility of the design which put a strait-jacket on house planning. Individual and local preferences had to be overridden, and there was no saving in price to overcome these obstacles.

Although this particular scheme is withdrawn, it is thought there is a chance of success for prefabricated units related more closely to the small builder's needs and at a price at least ten per cent cheaper than the total of the separate parts. *Architectural Forum*, New York, November 1950.

Printing: "Design in the Printing Industry," by Ruari McLean. Every problem in the design of printed matter has literary, artistic and technical aspects. The typographer's art, therefore, is to give words their right character. Most typographers are employed not by printers but by publishers and advertisers. These designers are not allowed by the unions to touch any type or work any machines; consequently they are often less qualified than they need be.

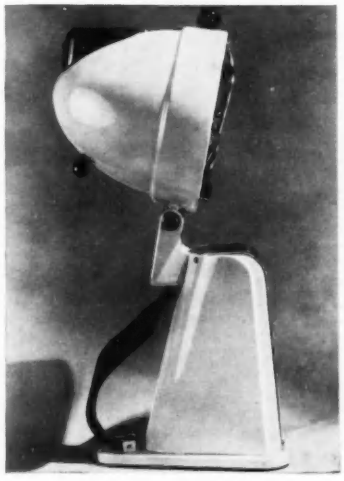
On the other hand, the printing trade is ignorant and careless of good design—partly owing to the fact that much work comes to it already designed. There are, the author considers, many rules in the design of printing that are matters of fact, not opinion; some of these are quoted. What is needed most is the discriminating reader and critic of print. *Further Education*, December 1950–February 1951.

Toys: "The well-designed toy," by Willy Rotzler. The manufacture of toys has come to rest on two principles that are equally prejudicial to the child: speedy deterioration (to accelerate sales) and the cult of novelty (to attract the adult). Attempts are now being made to return to the solid qualities of craft-made toys. A second line of development is in the manufacture of constructional games which stimulate the co-ordinating faculties and develop a sense of form and colour. *Werk*, Zurich. No 12/1950.

Training: "We Accuse the Ministry of Education." A complete change in the Ministry of Education's four-year Diploma course in textile designing, and its subsequent recognition by industry, is recommended. Practical realism in the examination would enable the prospective employer to put some faith in the diploma. Alternatively the industry should itself provide a suitable examination which would meet its requirements. The student embarking on a four-years' intensive course should have a greater certainty of a job and a reasonable salary than at present. *Skinner's Silk and Rayon Record*, December 1950.

Transport: "Rolling Stock Design and Construction," by F. W. Matheson Sinclair. A survey of developments in railway carriage design in the last 20 years, with discussion on the advantages and possibility of replacing mild steel by aluminium alloys, low-alloy high-tensile steels or stainless steels. *Times Review of Industry*, December 1950.

Two approaches to the design of radiant heat appliances. Left, Sanasun *sun-ray lamp designed by Machiel Wilmink and made by Oostwoud-fabrieken, Utrecht. The hand-grip and some small parts are plastic mouldings; other components are sheet steel and aluminium pressings. This "stylish" design may appeal to the layman more than the expert*



Below, infra-red radiator by Philips Valvo Werke, Hamburg. It can be used standing on a table, as here, or fixed to a wall. (*Photograph from* Holland Shipping and Trading, *Rotterdam*, 8/1950)

Packaging experts' visit to America: what did they mean by "design"?

SIR: Last year, under the aegis of the Anglo-American Council on Productivity, a Specialist Team visited the United States to investigate American practice in packaging. Its terms of reference (which I quote from its admirably presented Report, recently published), were:

> To take under review the latest practices in the use of packaging in United States factories, and to study their design, appearance, cost and general effectiveness. The Team will be chiefly concerned with the retail package.

The 13 members of the Team were drawn from representative sections of the packaging industry, covering the principal materials and processes used in this country. It is not apparent, however, that any individual was included with specific competence to survey the factor of design and appearance which, it will be seen, figures largely in the terms of reference. "Design" might of course be interpreted as referring to the structural design and physical performance of the package, for the investigation of which the Team was no doubt ideally qualified; but the conjunction of the words "design" and "appearance" makes it clear that "design" is not used exclusively in this sense.

It is still widely assumed that considerations of appearance call for no particular qualifications but come within the competence of salesmen, accountants and the suppliers of raw materials. This assumption is the biggest obstacle to the progress of design in almost all sections of British industry; and the packaging industry, in this respect, is particularly culpable.

"Many of the large companies in the US," observes the Report, "engage the services of free-lance designers who . . . have the confidence of the client and are given a complete picture of the company's policy and business methods. The confidence is a two-way exchange. The designer often influences not only the design of the product but the whole policy of marketing and selling." In short, the professional designer enjoys the status and respect without which his contribution to industry could not become effective.

If any further teams should be despatched to America charged with studying questions of "design and appearance" may we hope that at any rate one member out of 13 will be selected on the basis of his qualifications for this task?

NORBERT DUTTON, FSIA,
London WC2

Car on two wheels

SIR: I am sending herewith photographs of a two-wheeled car designed and built by Jan Anderle, a Czech friend of mine. He has spent many years designing extraordinary bicycles on which one sits or lies with the steering handles at the side. To my surprise, I found one of these models easy to ride, despite the lying posture one assumed.

The design of the prototype car is the result of work which Mr Anderle has carried on since 1936. It has a 615 c.c. twin-cylinder water-cooled engine of Czech make, and a gearbox giving three speeds and reverse. It was built from existing car and motor-cycle parts; the gearing and other components were not designed for the job. A further car is being built which will have a better system of gearing, an improved body with drop-head roof, and a smaller engine—the 250 c.c. Jawa.

I doubt if this delightful little car will ever go into production, in the light of political changes in Mr Anderle's country; but I think the neat design deserves mention. Until the speed for balance is attained, outriggers prevent the car from overbalancing. These outriggers are retracted into the body when not in use.

J. C. RICE,
Cosby, Leicester

Tribute to a craftsman

SIR: I hope you will allow me space for a few words of appreciation upon the death of Jack Goodchild, the Windsor chairmaker: for we have lost a very fine craftsman in a craft that is fast disappearing. His chairs have found their way to many parts of the world, but none of them ever bore his name. I once asked him why, and he replied, "Well, I always hope the next one will be better." In these words we have the reason why his chairs were masterpieces of this craft. His eye for line and proportion never allowed his chairs to become simply examples of elaborate craftsman skill, but developed them into works of art, combining beauty and comfort.

I look back with pleasure to hours spent talking with him; it was of Windsor chairs that he most loved to talk, and he would be filled with excitement on seeing some detail on a chair that added to the fund of knowledge on this subject, so dear to his heart.

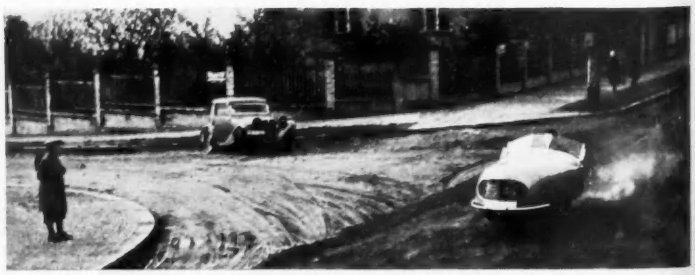
DENNIS YOUNG, ARCA,
London SE22

Manufacturer defends Utility

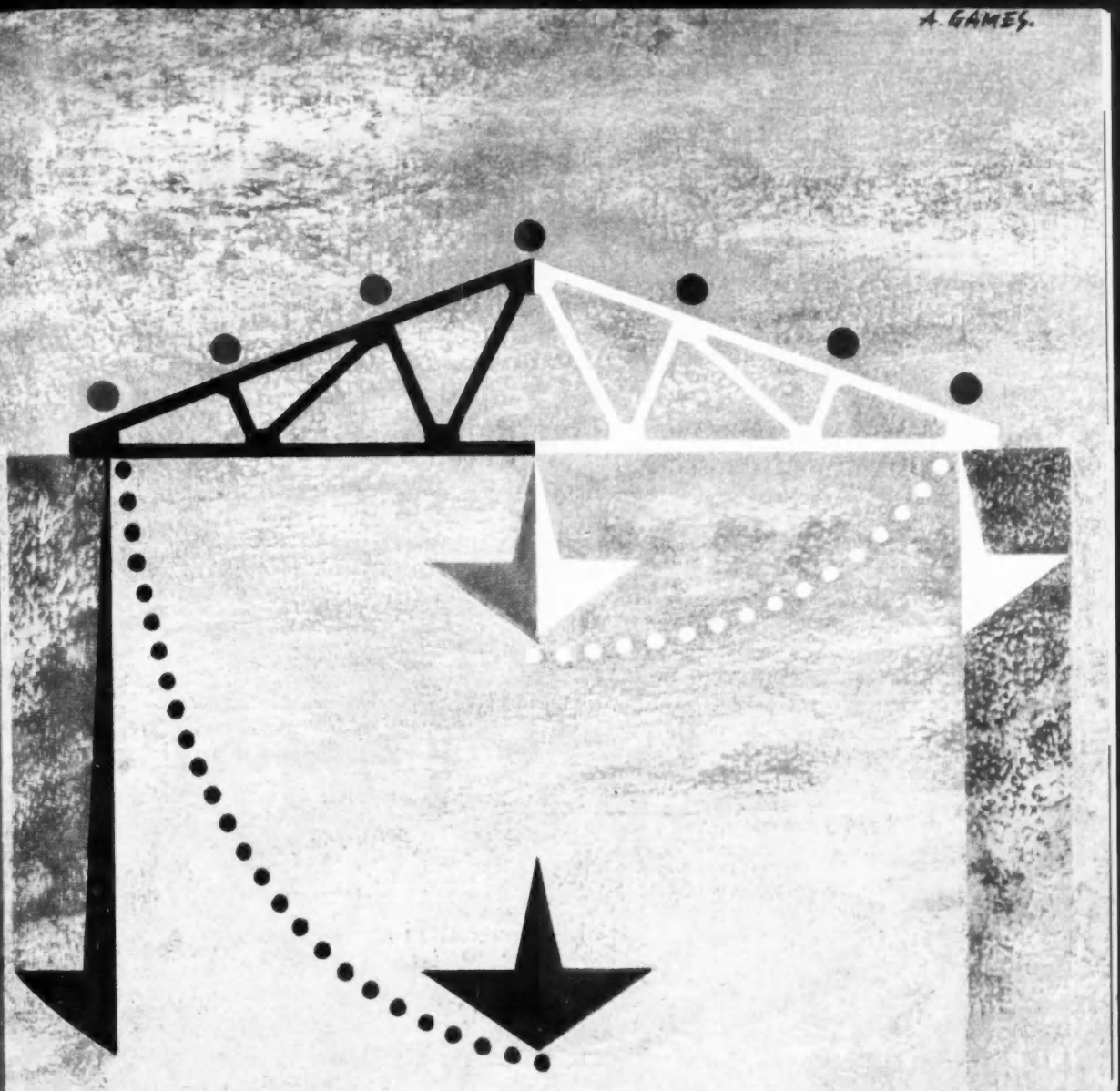
SIR: Leslie K. Watson, in his letter in December DESIGN, mentions in a rather discouraging way the architect's client "making do with his old furniture, or, if he has to buy new, insisting on Utility to avoid Purchase Tax."

As one of the firms pioneering good contemporary design to be made under the Board of Trade Utility scheme, we feel that this statement is unfair to the

continued on p 29



TWO-WHEELED CAR—*or enclosed motor-cycle? The ingenious vehicle described in the letter from J. C. Rice, above, was designed by Jan Anderle, Czech engineer and air-pilot. There are outriggers to keep it level at slow speeds: they are retracted as it goes faster*



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Note the thick cross-section of the walls of the case, the neat hingeing of the lid, the fine surface finish. Metal bars are magnetised to prevent movement of the flies. A small spring clip is riveted in the front to provide a firm closure.

Fishermen require fine tackle and Milwards of Redditch make it. So when this well-known firm decided to market a new fly case, their first concern was for quality. The result is this neat container designed by Roanoid Plastics Ltd. and moulded by them from Beetle moulding powder.

As with all containers moulded from Beetle, the case provides essential rigidity and strength. It is good to look at and has a pleasing surface texture. It has pure colour, for, above all, it is in their colour possibilities that Beetle and Scarab excel.

It is said that fishermen are fussy about their gear; no less so are housewives and husbands, smokers and shavers, cosmetic users and confectionery consumers. They know a good product by the quality of the container it is packed in. Appearance counts for more than ever when money is tight. So if sales are your business let us tell you more about the possibilities of containers made from

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manufacturers. If Mr Watson would care to visit certain shops specialising in this type of design, or if he would care to visit our works, he would see a selection of furniture worthy of his best building.

Most of the furniture which we are supplying for the Festival of Britain is made under the Board of Trade Utility symbol.

D. E. BRASTED
Director,
Geo. M. Hammer and Co Ltd,
London N4

"No substitute for wool"?

SIR: It is perfectly true, as Mr Jordan suggests in his letter (DESIGN No 23, p 27) that there is less friction between clothing and hard upholstering materials such as leather, plastics, etc, than between clothing materials and upholstery textiles. One must bear in mind, however, that the shine on clothing is only produced while the clothing is actually sliding over the upholstery. One of the most important effects of the high friction between clothing and upholstery textiles is that it prevents the occupant of, say, a chair, from sliding about. With plastic or leather upholstery the friction is lower and sliding is easier.

The laboratory tests quoted in the letter do not, therefore, support the argument. They do not give a relevant picture of what actually takes place between clothing textiles and upholstery materials, since for any given time the movement of the materials over one another *during the test* is the same, whereas in actual usage the movement of clothing textile over upholstery textile would be very much less than clothing textile over hard upholstery material. The effect of this property of sliding friction has apparently been overlooked by your correspondent.

R. J. BRAY
Director, Scientific & Technical Department,
International Wool Secretariat
London SW1

Bus design for export

SIR: In last October's DESIGN you included a photograph of the prototype body produced for the 620 buses ordered for Cuba. Road tests on this body showed it desirable to give more visibility to the immediate front of the vehicle; consequently, we have lowered the screen line in the latest version.

Whilst I agree that the "peak" on which you commented is somewhat incongruous, this was a customer's requirement to maintain similarity with other vehicles of his fleet. To my mind, the lowering of the screen and subsequent corner treatment have made this "peak" less objectionable. (The Leyland *Royal Tiger* motif, which is disposed within the "peak," had not been fitted when the photographs were taken.)

A view of the interior shows the simple design. The seats are trimmed in plain blue Vynide, and the linoleum in the same colour. The roof is off-white cellulose with polished light-alloy rails and mouldings. . . . Absence of parcel racks gives a far more spacious feeling to the interior than is obtained in a corresponding home-market body.

C. E. BUTTERFIELD,
Chief Engineer,
Saunders Engineering and Shipyard Ltd,
Beaumaris, North Wales

Critical craftsman

SIR: Reading your editorial review of John Farleigh's new book, *The Creative Craftsman* (DESIGN, No 24, p 2) I admired your restraint in omitting to comment on a very odd passage in this book.

I refer to the remarks of Harry Norris, woodworker, Lancashire, replying to the question: "Would you say the machine is capable of producing good design?" He is quoted as saying: "Industrial Design for nearly thirty years now has been a subject for high pressure salesmanship. Judged on performance, we may say: Never was so much paid for so little for so long. An esoteric jargon has been evolved—old-fashioned terms like 'proportion' are not used by the cliques. They speak in terms like 'spatial relationship' and they are overfull of enthusiasm for new materials. In fact, to hear some of them talk, you would think that only survivors from the Bronze Age used such old-fashioned materials as wood, silver, wool or leather. I am afraid Ye Olde Tavern Car on the British Railways is more the style of thing the machine is likely to produce than it is to produce good design."

As for Mr Norris's remarks about the Tavern Car, no industrial designer, to the best of my knowledge, played any part in its design; the whole idea seems to have been opposed, from the moment it was first heard of, by the Council of Industrial Design and by individual industrial designers.

Surely Mr Norris is basing his judgment of industrial design on the charlatans who have practised as industrial designers of one sort or another—a small minority. If we were to judge creative craftsmanship on the same basis, they would be damned just as deep.

F. J. DAWSON,
Birmingham

Appeal to furniture-makers

SIR: Recently you were kind enough to refer in your columns to the catalogue of the Shoreditch Public Libraries' collection of books on furniture and allied trades.

It is intended to produce a supplement, but before proceeding with this I wish to strengthen the representation of manufacturers' catalogues and lists, pamphlets and similar material. May I appeal to your readers to supply any publications of this kind that may be available?

C. M. JACKSON,
Borough Librarian,
Public Libraries Department,
236 Kingsland Road,
London E2

A RECORD EXPORT ORDER, *worth* $10,000,000, *came to Britain for Leyland buses with Saunders bodies. We illustrated the prototype in* DESIGN *No 22, p 17: the production model, below, is of improved design—as pointed out by J. C. Butterfield in his letter. The buses are for Cuba*

Notebook

Fires please

The Englishman's love of a coal fire is well known; the extremes to which it goes are almost unbelievable, even by Englishmen. A few years ago we read in a trade paper of a new electric "fire" which was designed to produce a flickering red glow as of firelight, without giving out any heat at all—perhaps a better piece of equipment for a psychologist's waiting-room than anywhere else.

Now a report in *Bus and Coach* (January 1951) puts even that into the shade. Alongside an illustration of a new vehicle for a Yorkshire bus company is the statement: "The body-heating unit of this coach . . . is unusual in that it incorporates an imitation coal fire."

"Unusual." We admire that restrained comment—and we feel that the designers of the Tavern Car forgot something after all.

People

Sir Miles Thomas, chairman of BOAC, is to open the National Display Exhibition (to be held at Central Hall, Westminster, from 15 to 19 October; sponsored by *Display* magazine).

J. Sainsbury Ltd have retained the services of Leonard Beaumont, FSIA, as design consultant, working closely with the firm on all matters affecting advertising, display and packaging. A large-scale example of his work was Sainsbury's stand at the 1950 London Dairy Show. Mr Beaumont is the designer, also, of the cover for DESIGN's companion publication, *Design in the Festival*, which is due to appear in May.

Students of the Polish School of Architecture, London, won two of the first three places in a competition for a hotel reception office making use of Perspex, organised by *Art and Industry* and sponsored by the Plastics Division of ICI. The winners were: 1 Henryk Blacknicki, 2 Andrew Jackson (Edinburgh), 3 Andrzej Chwalibogowski.

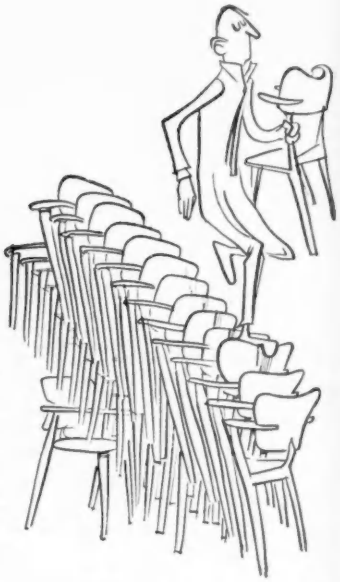
This year's competition for the two *Punch* Scholarships in Humorous Art resulted in a tie between three students —Valerie Brook (Sheffield College of Art), Derek Chittock (Slade School) and F. W. Smith (Camberwell School of Arts and Crafts). They receive £100 each.

Enterprise

With publicity-enterprise equal to their design-enterprise, Vantona Textiles Ltd introduced two Commonwealth Trade Commissioners and a South African film star at a Press view of new patterns in towels and bedcovers for the Dominion markets. This followed equally conspicuous market-research-enterprise by Vantona's chairman, Roland Dunkerley, in visiting those markets to see for himself.

In woven textiles such as Vantona's (see DESIGN No 15, p 10) pattern is necessarily part of the cloth construction—not something added afterwards. They call for the closest co-operation between artist and technician: the results, especially in towelling, are materials which look delightful even when seen from the "wrong" side.

Vantona Textiles have more justification for pretty girls in their publicity photographs than most firms. Main subject of the picture on left is one of their new Joyous Morn *towel designs*



"The Stacking Chair." Unfortunately, Stacking Chairs are always *stacked, and very hard to un-stack. In un-stacking, Stacking Chairs lose many of their charms. . . . The universal use of Stacking Chairs must await the advent of Stacking Men (and Stacking Women). . . ."—From* Take a Chair, *the booklet referred to below*

Red faces and pulled legs

One of the wittiest Christmas souvenirs we have yet seen was *Take a Chair*, a booklet from Hollis S. Baker of Baker Furniture Inc, Grand Rapids, reprinting an article by Peter Blake and Robert Osborn from *Harper's Magazine*. (We make no apology for referring to it in February; our copy arrived almost as late as your last issue of DESIGN, with a covering note which said: "IS OUR FACE RED! Unfortunately the *Take a Chair* reprints were mis-directed to Detroit, then sent back to New York. . . . Sorry that our greetings to you are so long delayed.")

The sketch at top of this page is one of many lively illustrations which good-naturedly pull the legs of most schools of modern furniture design. A familiar example is The Chair with the Hole, in moulded plastics: "The less said about this chair the better. This magazine is entered as second-class matter with the postmaster at Albany, NY, under the Act of March 3, 1879. Such chairs are forbidden under this Act."

Mr Baker appends his own recipe for sitting comfort: the Ox Yoke Chair, which "can be occupied side saddle, straddle or in crouching position. Especially useful for sitting on the small of the back—our favourite sitting position."

Credit where due

Credit-lines for two of the illustrations of monitoring instruments in last month's DESIGN, page 6, were transposed. The upper (hexagonal) instrument is made by Ediswan, and the lower (pistol-shape) instrument by E. K. Cole Ltd, not as previously stated.

Mobiles in the wind

The prices of Alexander Calder's mobiles appear to have risen even more steeply than the prices of most other things between Calder's first London show in 1936 and his second, in January 1951. And that perhaps is the reason why the Lefevre Gallery's cash-register was ringing up "No Sale" on the last day but one of the recent exhibition: the mobiles are gay in shape and in colour and fascinating in their movement (stimulated at the Lefevre Gallery, we noted, by two Frost fans in opposite corners of the room).

Although mobiles are unusual in this country as a "gallery" art-form, they have of course been used as features of exhibition design, and they will be seen again in the South Bank Exhibition. We thought the *Manchester Guardian*'s London art critic summed-up the Calder mobiles and stabiles very fairly as "intellectual toys rather than works of art. . . . I felt amused admiration for ingenuity but . . . deeper emotional levels were quite untouched."

The catalogue claimed that "Calder as an artist has found us new images—made out of words taken from an engineer's or industrialist's dictionary, seen against nature through very human eyes, with a very youthful heart."

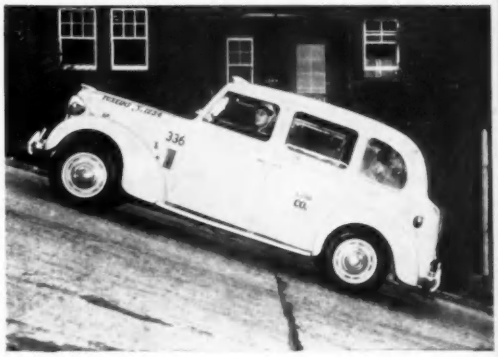
New books

Screen Process Printing 1951 (12*s* 6*d*) is the first publication of Skinner and Wilkinson (6 Gloucester Court, Headstone Drive, Wealdstone, Middlesex): a promising start. . . . We cannot say the same of *Modern Lettering and Layout* by Cecil Wade (Pitman, 20*s*). . . . The Report to the British Transport Commission on *The Preservation of Relics and Records*, handsomely printed, is issued by the Commission at 1*s* 6*d*.

Tailpiece

From a description of Crewe in 1843, quoted in *The Social and Economic Development of Crewe* by W. H. Chaloner:

> The dwelling houses arrange themselves in four classes: first, the villa-style lodges the superior officers; next, a kind of ornamented Gothic constitutes the houses of the next in authority; the engineers domiciled in detached mansions, which accommodate four families, with gardens and separate entrances; and last, the labourer delights in neat cottages of four apartments, the entrances with ancient porches.



Not freak photography, but British design in action overseas; an Austin taxi climbing Filbert Street, San Francisco—the first British cab to go into service on the American west coast

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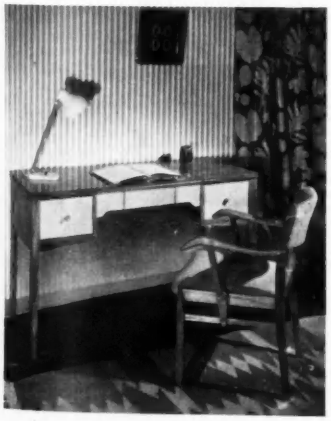

This is one of the 27 pieces designed by The Story Design Group in the new comprehensive "Unad" range of related contemporary furniture. The designs are straightforward and sincere, and will age with dignity. The workmanship is quite exceptional.

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4′ 3″ Writing Dressing Table N. 5 closed Finished all round. Can stand free. *4′ 3″ Writing Dressing Table N. 5 open Back view in Blackbean.* £21

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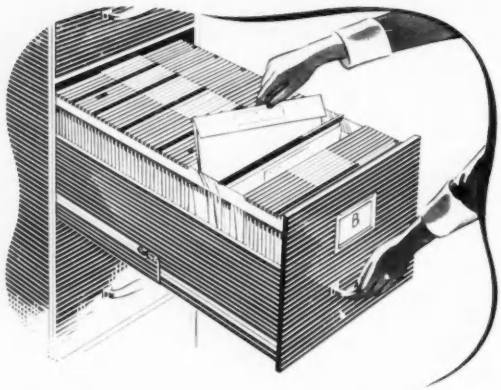

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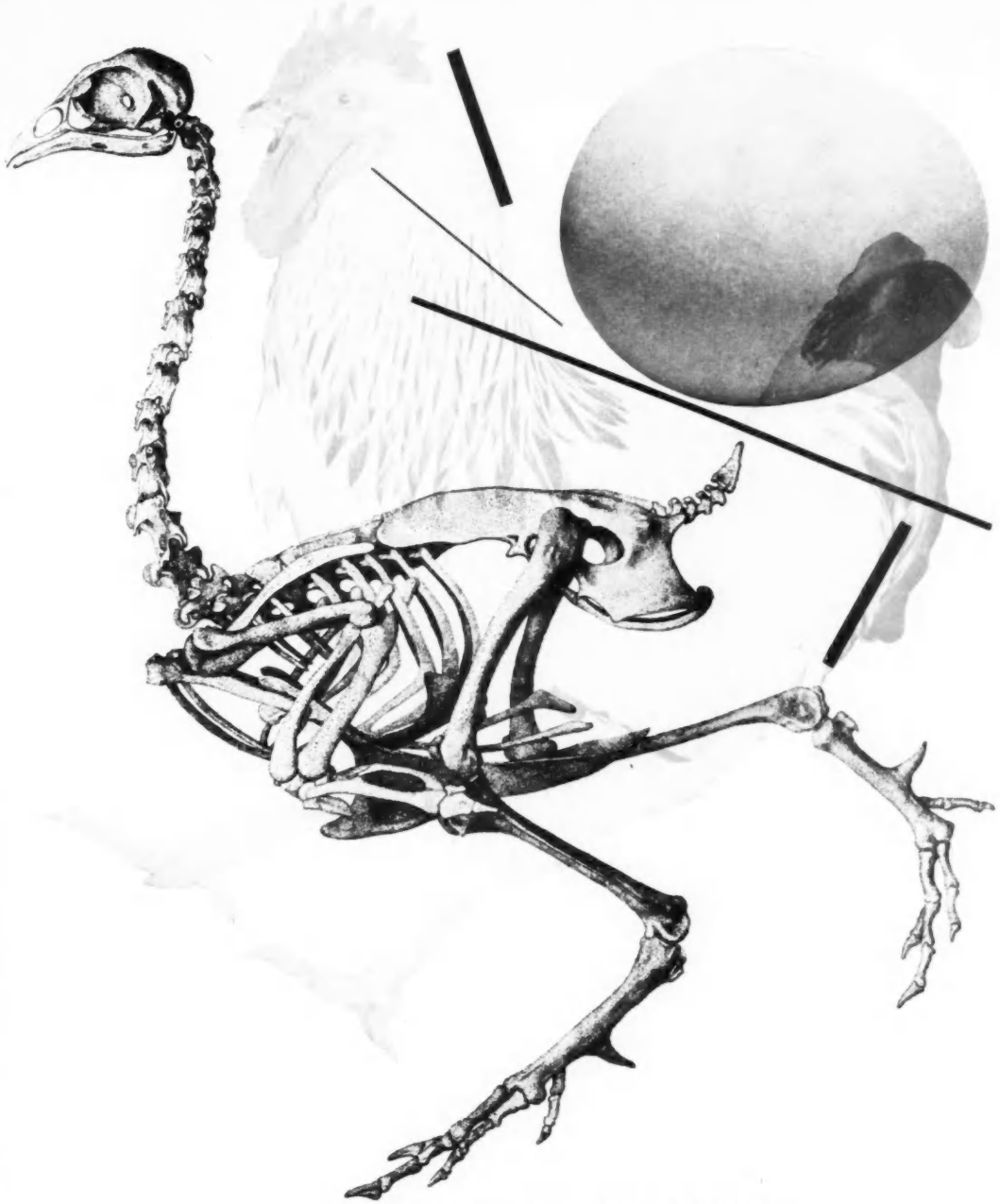

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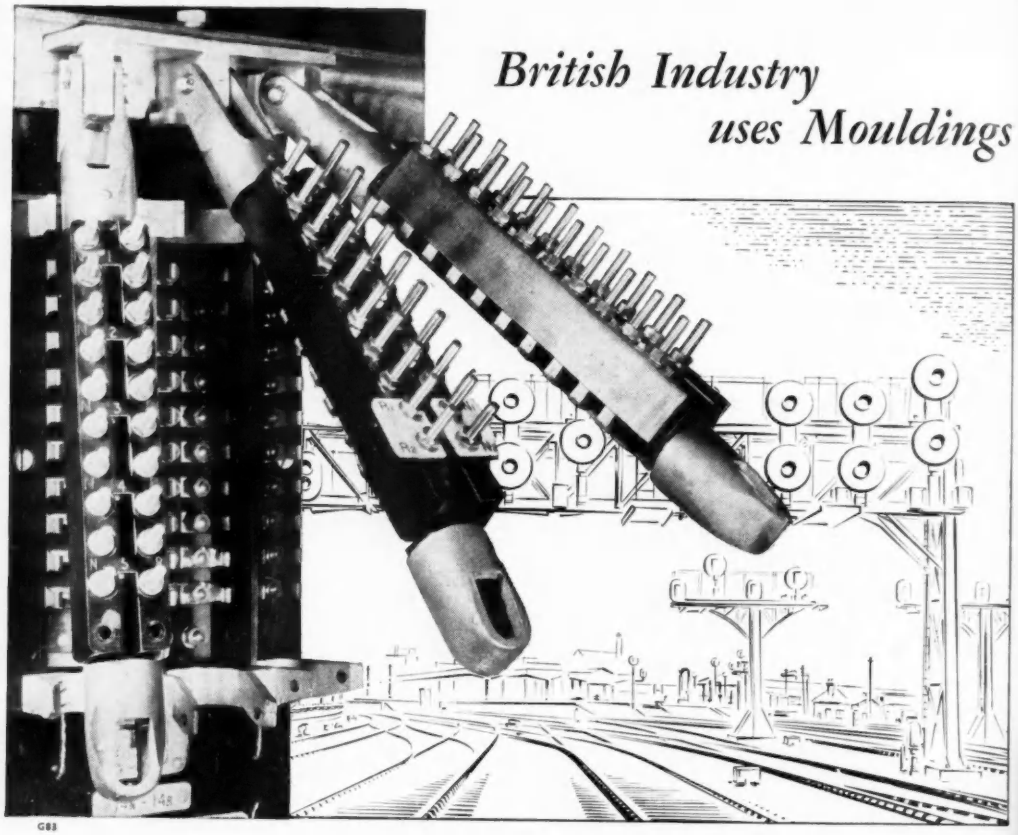

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Planning for Progress!

THE "MASON" DRAFTING STAND

The Drafting Stand shown here is based on the principle of counterbalance and allows the draughtsman to obtain any board position from horizontal to vertical with speed and ease. The method of operation is simple. Firm pressure on the back foot-pedal bar unlocks the assembly and the board is adjusted into any desired position by lightly using the handgrips provided at the base of the board cradle. The assembly is then locked by depressing the front foot-pedal bar. Double Elephant, Antiquarian or Hamburg drawing boards may be used, fitted with a standard drafting machine or a parallel-movement straight edge. Whichever is preferred, a suitable counterweight is fitted to ensure accurate balance with finger-tip control.

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Full details of this equipment are available from the DRAWING OFFICE SERVICE DIVISION. Telephone No: COLCHESTER 2266.

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ICI

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virtue and abiding love."

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